

TransEcoNet WP6: Identities and Strategies

Action 6.1

Perception of landscape changes in three trans-boundary focus areas

based on oral history surveys with local inhabitants, stakeholders and experts

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1. Introduction

Protected areas, including national parks, nature parks or biosphere reserves, are often islands isolated by highly transformed areas, traffic corridors or settlements. Over the last decades, it became apparent that the Earth's biodiversity and natural system cannot be preserved only with protected reserves (Németh, 1995). There is a need for a spatially interconnected system of natural areas, as an ecological network, which allows dispersion, migration and reproduction for plants and animals, thus helping their survival. Ecological network is the "infrastructure network of nature", which is a living frame for wildlife and humans, and for people also provide many cultural and health services (Konkoly-Gyuró, 2010).

The TransEcoNet (Transnational Ecological Network in Central Europe) project aims at assessing trans-boundary ecological networks. It strives to prepare strategies for protection, restoration, planning and management of the nature's infrastructure network. In the framework of the project both protected and non-protected areas in Central European border landscapes were investigated and assessed in relationship to their history, connectivity and biodiversity.

According to the European Landscape Convention, landscape is a territory, perceived by people, which is characterized by the relationship between nature and humanity and also referred to as the cultural heritage of a region (Council of Europe, 2000). Following this concept, within the TransEcoNet project, historical and cultural components of landscape changes were considered, for instance, the land-use changes and the perception of changes as well as the relation between nature and society in the project regions.

In TransEcoNet there are two work packages assessing landscape changes. WP4 revealed the land use/land cover transformation in the last 200 years based on historical maps. WP 6.1 surveyed people's perceptions of changes in border landscapes by means of interviews with contemporary witnesses. Recently this method of interviews has become more important as a tool for documentation of local knowledge and historical development of landscapes for instance in regional planning, in nature conservation and environmental management (Calvo-Iglesias, et al., 2006).

In the present study the results from the interview survey of oral history with regard to perceptions of landscape identity, the historical and recent landscape changes will be presented in three trans-boundary project regions. Based on the national surveys carried out in Germany, Czech Republic, Austria, Hungary and Slovenia in 2010-2011, this report focuses on the comparison of perceptions in the neighbouring countries and summarises the results of these seminal studies.

2. Research issue and method

The main research question is: how do local people – experts and non-experts - perceive the landscape, what are the most important characteristics, how people consider recent and longer landscape transformations? What is important for them, for their life? How do they value the changes, what did they consider as positive or negative attributes? People's opinions reflect their sensitivity toward their landscape, their environment, and that is crucial for future strategies. This part of the project consists of social research, resulting in qualitative information.

2.1. Project regions

In the framework of the TransEcoNet project, the survey of oral histories has been carried out in three trans-boundary regions: Elbe Sandstone Mountains (Czech Republic – Germany), Neusiedler See/Seewinkel – Fertő-Hanság (Austria – Hungary) and Őrség/ Goričko (Hungary – Slovenia) (Figure 1).

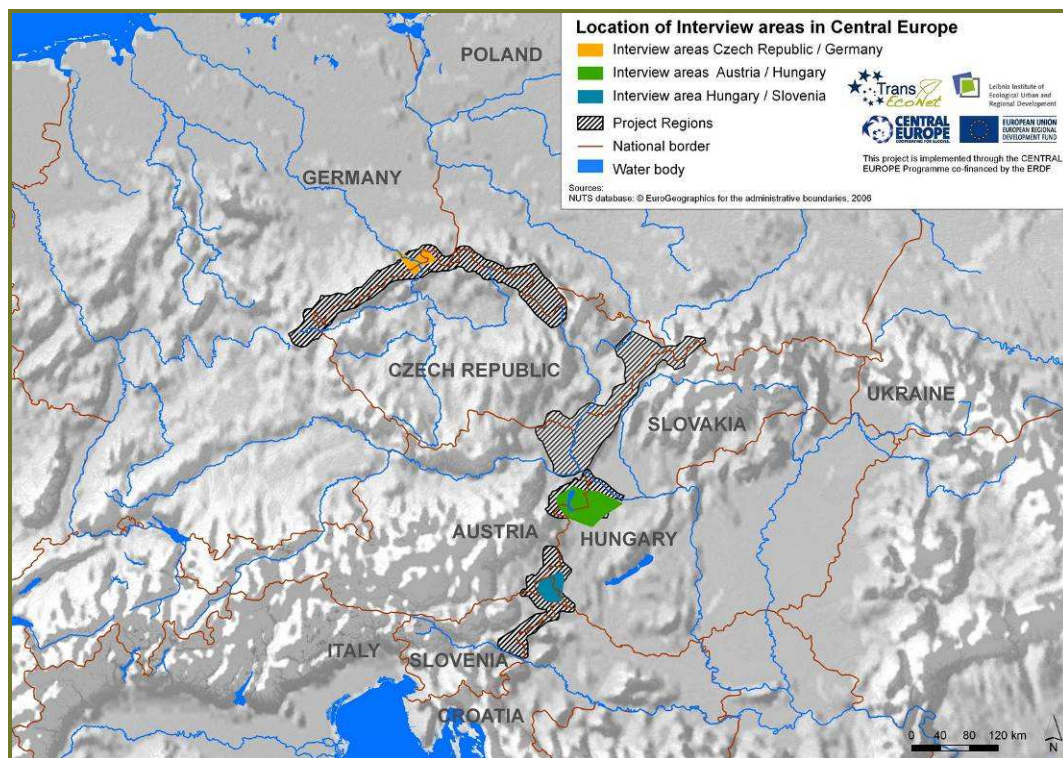


Figure 1: Location of the project region in Central Europe

Layout: Sylvi Bianchi

2.1.1. Project region North (Elbe Sandstone Mountains, Czech Republic – Germany)

Within TransEcoNet Project Region North, on the border between Germany and the Czech Republic, the Ore Mountains adjoin eastwards the landscape of the Elbe Sandstone Mountains. This picturesque trans-boundary landscape, also known as Bohemian and Saxon Switzerland comprises the investigation area of the Czech-German study for the surveys of oral history. The Elbe Sandstone Mountains are situated in Germany in the Free State of Saxony and in the Czech Republic in the region of Ústí nad Labem. They are surrounded by the Bohemian Lowlands and Lusatian Mountains

in the North and East, the Central Bohemian Uplands in the Southeast and South, by the Ore Mountains in the Southwest and by the Dresden Plain in the West. On the way from the Giant Mountains to the North Sea the Elbe River flows through this low mountain range mainly made of sandstone. In deep canyons and valleys smaller rivers and streams erode into the sandstone and flow into the Elbe.

The investigation area comprises a number of protected areas: the national parks Bohemian and Saxon Switzerland, which are known as a common trans-boundary national park region, as well as the adjacent landscape conservation areas on both sides of the border. The area of Bohemian Switzerland lies north of Děčín/CZ on both sides of the Elbe River. It became a protected area in 1972 (250 km²), while the part on the right side of the Elbe was declared as National Park in 2000 (79 km²). It is adjacent to the Saxon Switzerland National Park in Germany (since 1990) which covers an area of 93.5 km² and the neighbouring correspondent landscape conservation area (287.5 km²). The name Bohemian-Saxon Switzerland is commonly used nowadays for this interconnected trans-boundary protected area. Within the present study the term “Elbe Sandstone Mountains” is used reflecting the geology of this natural landscape.

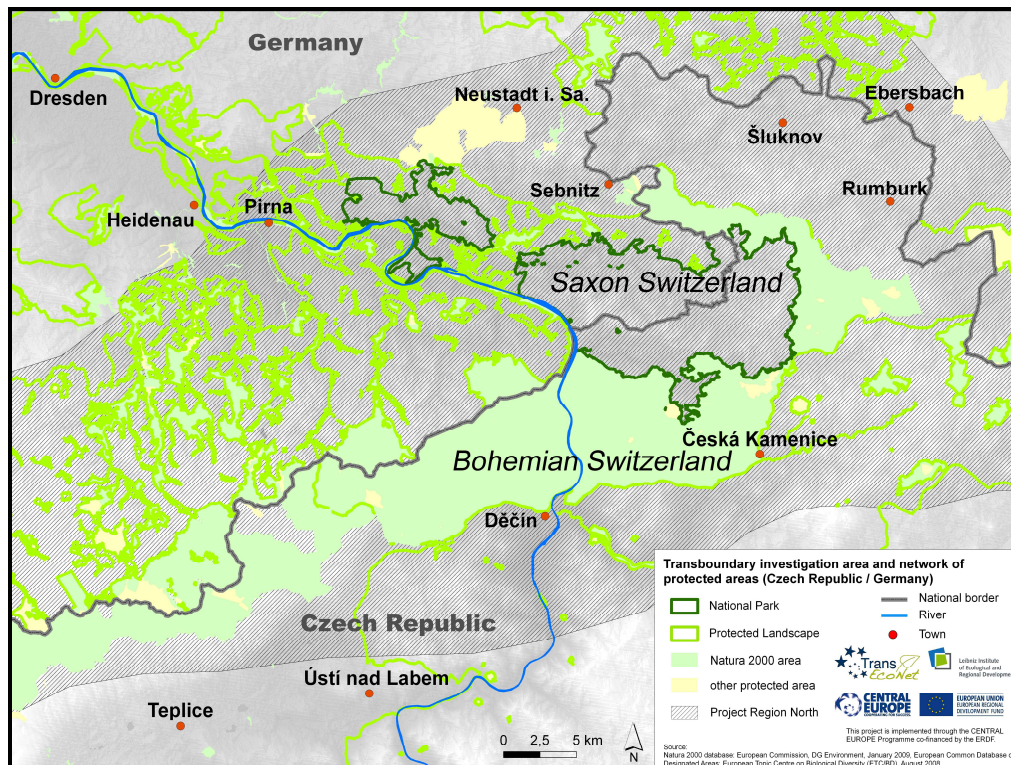


Figure 2: Trans-boundary investigation area of the Elbe Sandstone Mountains and network of protected areas

Layout: Sylvi Bianchi

2.1.2. Project region Central-South (Sopron, Fertő/Neuseidlersee, Hanság/Waasen; Austria-Hungary)

The Eastern Austrian and Northwestern Hungarian trans-boundary region consists of the area extending from the Alpine foothills, (Sopron Mountains) through hills and flatlands of the Fertő - Hanság basin towards the Danube floodplain Szigetköz (Figure 3). On its northern side, the project area covers the Parndorf Plateau, Heideboden, and the Leitha flatland.

The varying relief (115 - 556 m above Baltic Sea Level) and geological settings resulted in a high diversity of landforms: deep lake basin on sediments, wetlands covered with peat, reclaimed

marshland, low and elevated terraces, sandstone hills and crystalline low middle ranges. The western part of the region is dominated by hill ranges and low mountains (Sopron Mountain, Fertőmellék and Rust Hills), and lowlands, (Wulka lowland), where historical towns are situated, (Sopron, Eisenstadt, and Rust). The central and eastern part is a flatland area, covering the Fertő and the Sopron basin, Seewinkel and Hanság/Waasen.

The core of the project region is Lake Fertő situated between the Sopron and the Leitha-Mountains, which is the most western occurrence of the eastern steppe lakes in Europe. It covers 174 km², with a reed belt of 320 km² (Békési, 2007; Löffler, 1974). The Fertő-basin is closely connected with the Sopron basin, not only geographically, but administratively and socially. To the east is situated Hanság, which once had an uninterrupted water system connecting with Lake Fertő. Today Hanság is mainly a flat and intensive arable agricultural area with forest plantations and forest belts. Only in very small areas do we find remnants of the former marchlands. The lake and its surroundings is a geographical unit, whose characteristic were formed by human-nature interactions during centuries.

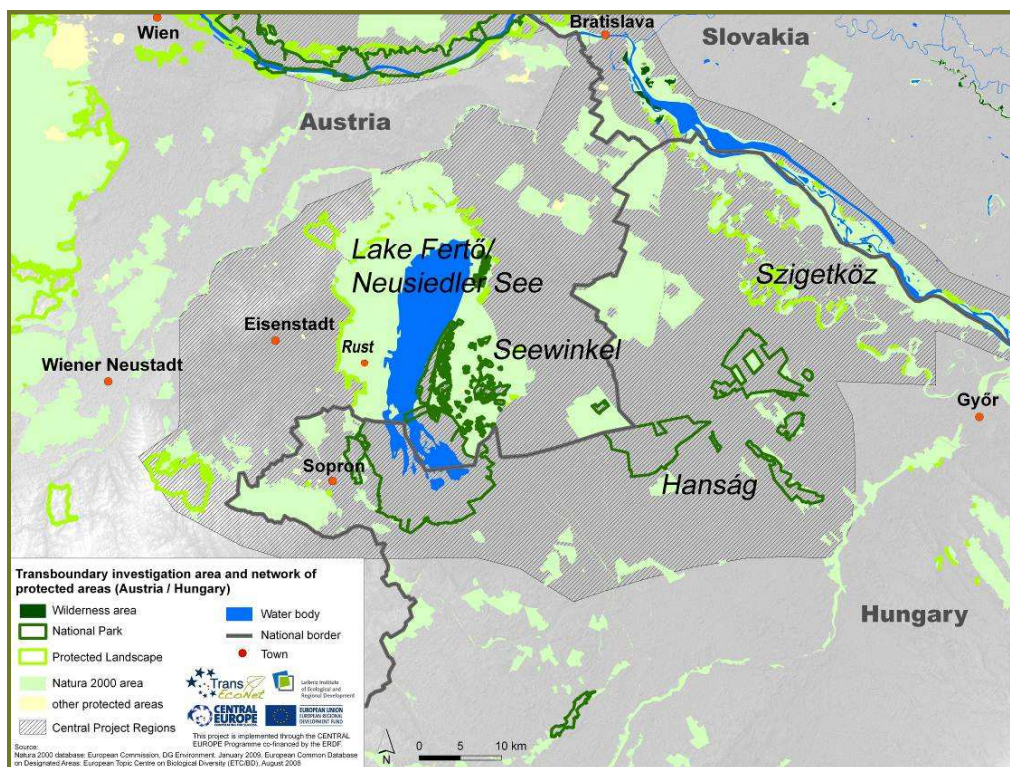


Figure 3: The Austrian-Hungarian project region

Layout: Sylvi Bianchi

The region is located on the frontier of the subalpine and continental climatic zone. Thus it shows significant habitat diversity, preserving several protected species. Not only the natural values but also the cultural heritages are significantly concentrated in this region. The activities of the Széchenyi and Esterházy families left their imprint on several places in the landscape. These traditions related to reed-harvesting, fishing and viticulture are important characteristics of this area.

This study area is internationally recognized for its outstanding natural and cultural values due to the abundance of wetlands, birdlife and rare plant species that are adapted to the specific habitats of the prevailing salt-steppe environment, and diversity of cultural heritage. There are several national and international designated sites, including the national parks in Austria and Hungary, Ramsar sites, biosphere reserves and Nature 2000 sites, crowned by the cross-border cultural landscape which UNESCO classified on its World Heritage List.



Panoramic view of the town Sopron
Photo: Éva Konkoly-Gyuró

On the Hungarian side, the Sopron and Fertő landscape have been analysed together, not only because administrative boundaries overlap, but also because of common land use and history. The reason for integrated assessment of the area, formed by the interaction of different geographical landscapes (lake basin, hills and mountains), is the justification of its Cultural World Heritage title. For people living in Sopron, Lake Fertő is as integral a part of their life, as Sopron is for people living near the Lake, as the city provides the central functions. Another important point for integration is the formerly mentioned activities of the Széchenyi and Esterházy families that produced the current landscape structure and scenery.



Panoramic view of the southern Fertő landscape in Hungary
Photo: Éva Konkoly-Gyuró

The separate analysis of Hanság was necessary because of very different landscape change processes. Although once Fertő and Hanság had a common water system, water regulations altered the former relationship and separated the two landscapes. Over the past one and half centuries significant landscape changes occurred in Hanság, while in the Fertő basin the former land use structure was preserved. Based on this, we separated the two areas in the northern Hungarian study area. We analysed Sopron and Lake Fertő together and Hanság separately.

In the Austrian study area, the results from questionnaires were very different from the western and eastern sectors. Due to these differences, the western and eastern parts were analysed separately. This separation was also necessary because of different natural conditions and land use.

2.1.3. Project region South (Őrség/ Goričko, Hungary – Slovenia)

The southern trans-boundary area, situated beside the Austrian-Hungarian-Slovenian trilateral border, consists of the Hungarian Őrség and the Slovenian Pomurje region. Pomurje is located in the uppermost north-eastern part of Slovenia.

Őrség has an undulating terrain between 200 and 324 m above Baltic Sea level, with gentle stream valleys and significant forest cover (60%). The relief and the underlying geological setting have been formed mainly by the sediments of the Zala and Kerka rivers. The area belongs to the Alpine foothills zone, and is rich in precipitation (800 mm/year). Thus, it is the most humid area of continental Hungary. The geography is heterogeneous with various natural and unique cultural values that have

developed locally. Today traditional customs and community structures distinguish Órség from neighbouring landscapes.

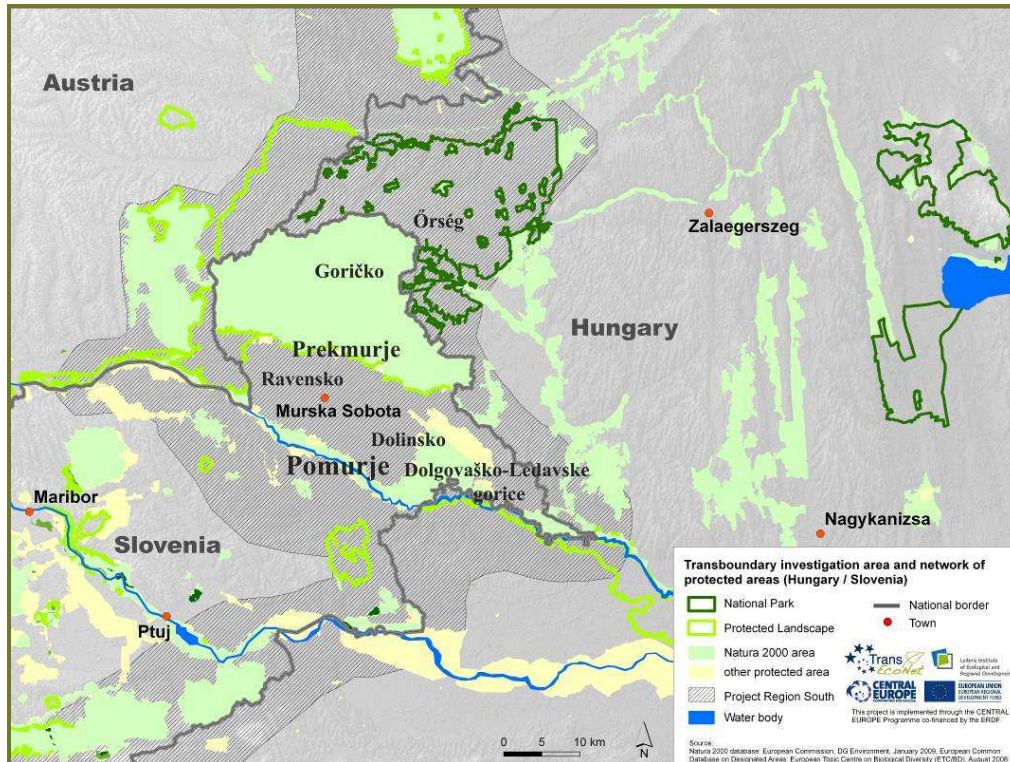


Figure 4: The Austrian-Slovenian project region

Layout: Sylvi Bianchi

Pomurje can be divided into several sectors: the northern hilly part known as Goričko and the southern lowland which is constituted from Ravensko, Dolinsko and Dolgovaško-Ledavske gorice. In Goričko there is no primary forest vegetation, but the forest encroached onto former agricultural land. As the relief circumstances (with moderate slope) were good for agriculture purposes, the forest was slowly removed as those surfaces were converted into agricultural fields (Ribeiro, 2011).

Prekmurje (the area of Pomurje, north from the river Mura) falls into the sub-Pannonian part of Slovenia. Throughout history the political borders in the area were constantly changing. From the 9th Century until the end of the First World War (1918) Prekmurje was part of the Austro-Hungarian Monarchy. The Prekmurje region of Northeastern Slovenia is considered one of the most important agricultural regions in Slovenia (Gabrovec & Kladnik, 1997; Cunder, 2009). The region lies at low altitudes (from 150 to 400 m), reaching 400 m only in single hill tops in the area of Goričko in the northern part along the border with Austria and Hungary (Perko & Adamič, 1998). The region is open towards the Pannonian plain and has a continental climate. The average annual temperature is 9.6 °C, the average in January is -1.2 °C and the average in July is 19.7 °C. The annual precipitation is the lowest in Slovenia - about 805mm.



Traditional farmstead in Órség, Szaknyér (HU)
Photo: Pál, Balázs

The trans-boundary area preserves a high natural and cultural richness. In Órség the landscape is covered by large forested areas, with scattered grasslands and arable lands, creating its unique mosaic structure. A predominant feature of Órség's cultural heritage is the dispersed rural settlement structure called "szer," which means group of houses on top of the hills. In Órség it was traditionally the people's duty to protect the western border area of Hungary. In order to perform this task, they built their houses and hamlets on hill tops, from whence - as the legend says - they could warn each other of a foreigner invasion by burning some trees as beacons. This is the only one area in Hungary that has preserved this ancient settlement structure. The older village houses are mostly traditional pisé or adobe construction over wooden beams with lathe and plaster on the upper floors. Older homes were built in a style very similar to those older homes in the Goričko region of Pomurje as depicted by the Hungarian-Slovene artist, Bálint Bellosics, in the 19th century.

The investigation area includes several designated sites which aim to preserve the unique natural values and the characteristic cultural features of the area. Two such protected sites are the National Park Órség, founded in 2002 and the Goričko Nature Park.



Hilly landscape in the Goričko area of Pomurje (SLO)
Photo: Gregor Torkar



Village homes and gardens on a slope below the cemetery at Velemér (HU)
Photo: Allen Liu

There are 44 municipalities in the region: 17 on the Hungarian side and 21 on the Slovenian side. The largest settlements are Murska Sobota (SLO) with 14,000 inhabitants, Lendava (SLO) with 3,400 and Óriszentpéter (HU) with 1,200 inhabitants, which is also known as the capital of Órség. The largest town and administrative, economic and cultural centre of the Pomurje region is Murska Sobota. Lendava is the second ranking town, which acts as a central location for the Hungarian minority in Slovenia. Due to its fertile soil, favourable position and low undulating relief this land was already settled in prehistoric times, resulting in a long tradition of local anthropogenic land use (Bakan et al., 2006).

2.2. Research method

In the sixth work package (WP6) of the TransEcoNet project, within the framework of landscape identity analysis in WP 6.1 called "Oral History," local residents and stakeholders views about landscapes and landscape changes were explored by a questionnaire. The survey was performed by a semi-structured questionnaire and an additional guidance and data sheet. The questionnaire consists of three main parts. The first part is related to the actual state, the second part focuses on landscape changes and the third part on the differences of the two sides of the state border. Occasionally, we helped answering with sub questions and control questions (Annex I).

In the first part, we collected information on the main characteristics of the landscapes, on the actual state and on effects that may result in changes. We asked interviewees to delineate the given landscape, to identify the main characteristics and to name those elements of which they are proud; which gardens, parks, cemeteries are worth mentioning; what kind of environmental problems they are aware of, and if they were familiar with the concept of ecological networks.

This first part was intended to explore information on landscape characteristics and actual knowledge on ecological networks. Questions were asked to gather information on the landscape uniqueness on the natural areas and green spaces, on the cultural and welfare functions, on landscape elements that can be beneficial for the ecological network and on potential threats, or environmental problems.

In the second part, the questions aimed at revealing the past landscape and the perceived changes. We asked interviewees about changes of the different land uses and economic sectors: agriculture, forestry, fishing, hunting, settlements, transport, industry and tourism.

Based on the description of the past landscape, we gained information on the interviewee's perception of the land use and land cover transformations in the study area. Locals described farming and other human activities, practices and their changes. They were asked about traditions, legends related to the landscape management and the respect of nature. The responses allowed us to draw conclusions about the man and nature relationship.

In the third part of the interviews we asked questions about differences and similarities on both sides of the border. The collapse of the Austro-Hungarian Empire and the Trianon peace treaty after the First World War created new national borders. Then after the Second World War, the Iron Curtain, between Eastern and Western Europe caused an isolation of these formerly interconnected landscapes. The trans-boundary study areas with the same natural geographical settings show significant dissimilarities due to the different political circumstances and development of the 20th century.

The so-called "snowball method" was used for selecting interviewees. It means that interviewees provide researchers with several contacts, thus an increasing number of respondents is created during the research (Babbie, 2001). We intended to choose elderly people, who had been living in the region for a long time, and had a good overview about its changes. We tried to set up a representative sample regarding gender and occupation.

In order to understand the mental landscape boundaries of the locals, in Hungary they were asked to define the landscape by drawing the boundaries on a map sheet. The mental maps method was not used in the other participating counties. Literature defines mental or cognitive map as all conscious properties which enable us to collect, organize, store, develop and adapt information related to space (Down & Stea, 1977). Living in one place redraws in our mind the actual picture of its landscape and settlements. What is near and far, what is ours and foreign becomes subjective. However, these concepts have common attributes such as important landmarks, roads, boundaries of individual neighbourhoods. From these elements the mental map of a settlements/landscape emerges, the map

visualized by locals, which does not necessarily match the pattern prepared by a cartographer (Letenyei, 2001).

In the three trans-boundary regions, a total of 214 interviews were carried out. According to our original aim, the majority of the interviewees were older than 60 years (58%); only few younger respondents, usually experts from the region, participated (*Figure 5*). While looking at the gender proportion we can see that almost three-quarters (71%) of interviewees were male. This larger number was probably caused by the snowball-sampling (males suggest males as possible interview persons).

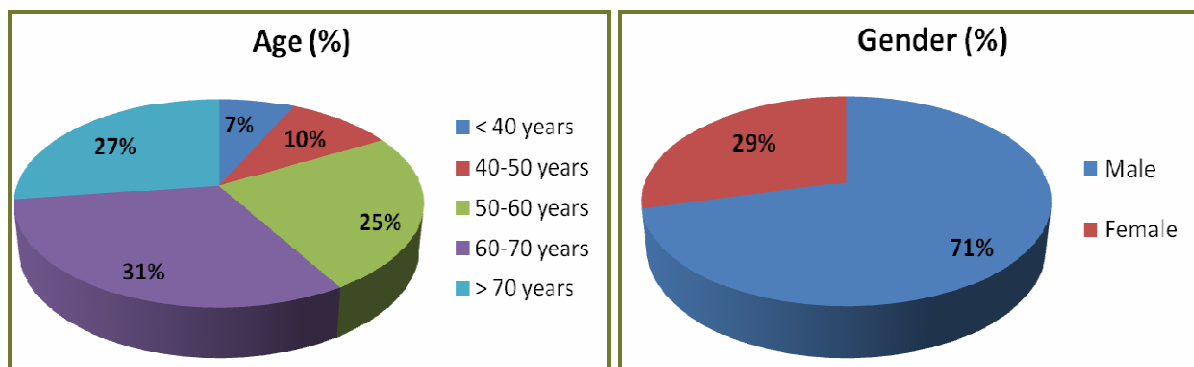


Figure 5: Distribution of age groups and gender
Layout: Valéria Bacsárdi

We tried to set up a representative sample. Therefore, we aimed to interview not only experts in nature conservation, but also people from different stakeholder-groups such as agronomists, foresters, teachers, public sector employees, and people working in tourism.



Figure 6: Interview locations in the Czech-German trans-boundary region
Layout: Sylvi Bianchi

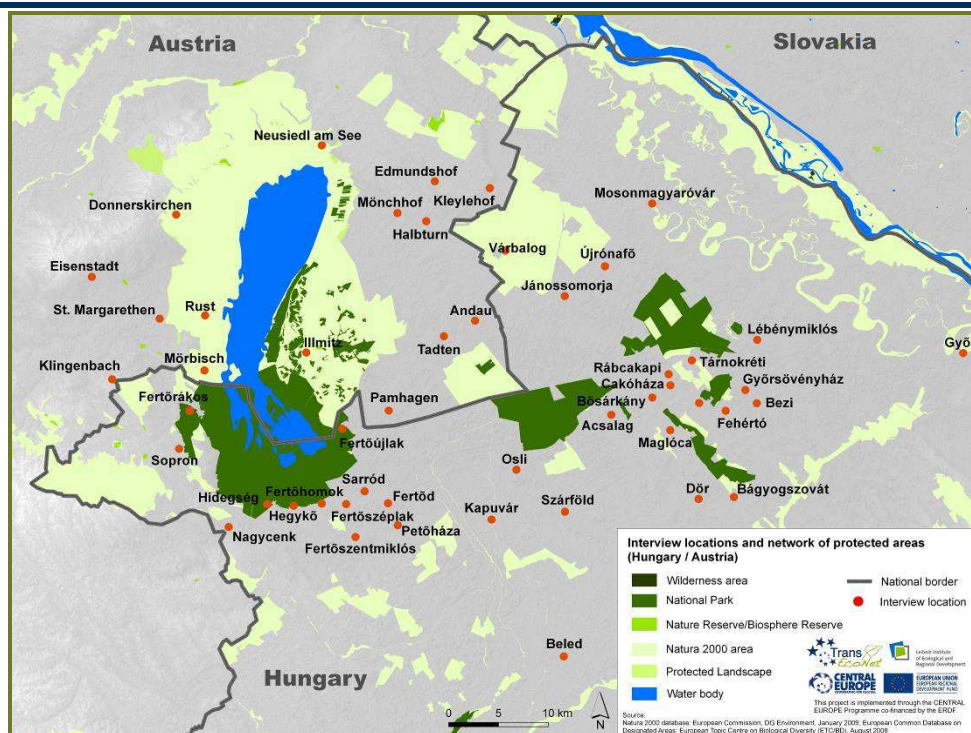


Figure 7: Interview locations in the Austrian-Hungarian trans-boundary region

Layout: Sylvi Bianchi

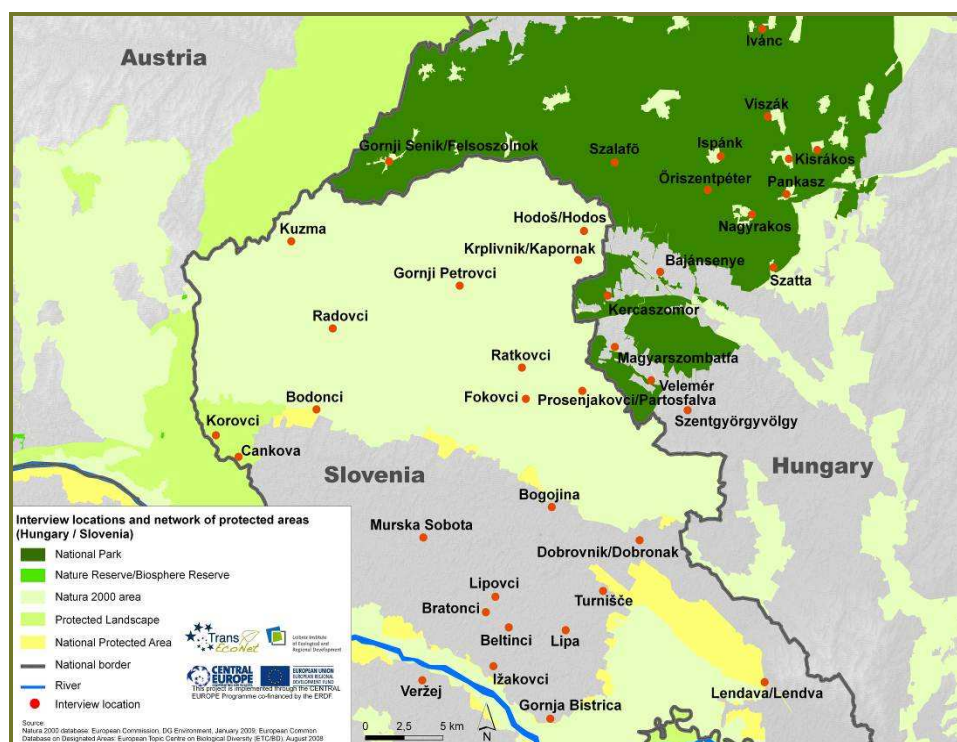


Figure 8: Interview locations in the Hungarian-Slovenian trans-boundary region

Layout: Sylvi Bianchi

3. Perception of the present landscape

3.1. Elbe Sandstone Mountains - Project region North

3.1.1 The boundaries of the landscapes

At the beginning of the interview, each respondent was asked to delineate their home landscape. The Saxon interviewees used the term “Saxon Switzerland” and the Czech interview partners used the term “Bohemian Switzerland” as descriptions of their homeland. Many considered their daily living space and area of activity; others saw natural elements like small rivers, hills and mountain ranges as delineations of their home landscape. Also the national border or the borders of protected areas were defined as the boundary of some respondent’s homeland. One Saxon interview partner knew that neither the Ore Mountains nor the Lusatian Mountains, the urban area of Dresden or North Bohemia belonged to Saxon Switzerland.

“Mostly you are imbedded in a landscape called ‘home.’ And home, that’s an area which someone is able to discover on foot. Well, my homeland ends in Česká Lípa, then in Ústě and at Jěstěd mountain. Everyone has his own circle. It’s strange but what lies behind the border I do not see as my homeland anymore. I’m a German born in Bohemia. And Germany is not my homeland anymore.”¹

(Interviewee from North Bohemia)

For some interviewees it was rather difficult to delineate “their” landscape or to focus only on the Elbe Sandstone Mountains. Rather they integrated the neighbouring areas of the Lusatian and Ore Mountains as well as the Central Bohemian Uplands into their everyday action radii. One reason for this might be the similar landforms of these landscapes. In the Lusatian Mountains you could find sandstone formations as they also appeared in the Elbe Sandstone Mountains but also knolls made of basalt, as in the Central Bohemian Uplands. The large forests of the Elbe Sandstone Mountains left of the Elbe continued in the western adjacent Ore Mountains, a Saxon respondent perceived.

It became clear that most of the interviewees did not see themselves as living in a trans-boundary area but rather in the respective national part of Saxon or Bohemian Switzerland. They know the other side of the border well, but it does not belong to their everyday perception. The national border is still strongly anchored in people’s minds.

3.1.2. The perceived character and valuable landscape features

“These are the table mountains and cliffs. These were also the first destinations for hikers.”²

(Interviewee from Saxony)

Many of the respondents emphasized that the geologic construction of the Elbe Sandstone Mountains was a unique feature itself. The bed of the Elbe, one of the most important river corridors in Central Europe, eroded into the soil of the Elbe valley on which the cliffy sandstone massif rests. Distinctive landscape elements like the table mountains, sandstone rocks, deep canyons and caves were the result of the erosion of this sandstone massif. Look-outs on the table mountains and rocks

¹Original citation: „Meistens ist man ja eingebettet in eine Landschaft, die man Heimat nennt. Und Heimat (...), das ist ein Umkreis, den man erwandern kann. (...) Also, meine Heimat endet, sagen wir mal, in Böhmisches Leipa, und dann Auscha, und sagen wir, am Jeschken. (...) Jeder Mensch hat so seinen Kreis. (...) Es ist komisch, aber das, was hinter der Grenze liegt, betrachte ich nicht mehr als meine Heimat. Ich bin ein Deutscher, in Böhmen geboren. Und Deutschland ist nicht mehr meine Heimat.“

²Original citation: „Das sind die Tafelberge und die Felsriffe. Das waren ja auch im Grunde zuerst die Ziele, die man aufgesucht hat als Kletterer.“

were mentioned as distinctive landmarks. From these points, one has a broad view over the whole landscape. In Saxony, famous look-outs mentioned were the Bastei, the fortress of Königstein, the Lilienstein table mountain and the Kipphornaussicht, a look-out near Großer Winterberg. The Czech respondents enjoyed the view from Děčínský Sněžník, from top of the Tyssa Walls and from the basalt knoll Studenec. For almost all Czech interviewees the most distinctive rock formation and natural monument was the Pravčická brána, the biggest natural arch made of sandstone in Europe.

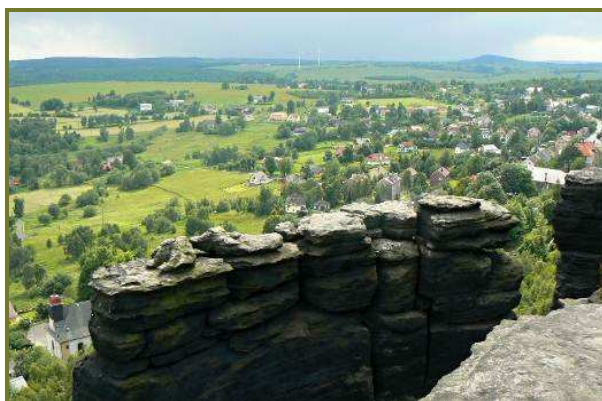


Look-outs are decisive landmarks
Photo: google panoramio/Roman Zázvorka



Pravčická brána is a famous landscape element
Photo: pixelio/Jörg Naujokat

Eight interviewed persons call the vernacular architecture as distinctive element of the landscape. The “Umgebinde” houses have been a common landscape element on both sides of the border since the 15th and 16th centuries. The landscape where this house form appears is also called “Umgebindeland.” It extends to the border triangle of Germany, Poland and the Czech Republic from Upper Lusatia and Saxon Switzerland to North Bohemia and Lower Silesia. The “Umgebinde” house combines the Eastern European block construction with the Western European timber frame construction. The block is tied around by bearing structure on which the roof or the timber-framed upper floor is situated. This support system is called “Umgebinde.” Over the centuries this construction was further developed and adapted to new demands.³ Some interviewees agree on the fact that these houses are important identifying features of the landscape.



Look-out from Tyssa walls
Photo: wikipedia commons/Huhulenik



Umgebinde house in Všemily/CZ
Photo: Anke Hahn

³ Umgebindeland e.V. URL: <http://www.umgebindeland.de>

“Saxon Switzerland is not a wild landscape but rather a cultural landscape. And this change between open land, forest and rocky areas I find amazing. This is the beauty of the Elbe Sandstone Mountains. It is a landscape where you can live.”⁴ (Interviewee from Saxony)

The interviewees highlighted the diversity of the historically grown cultural landscape of the Elbe Sandstone Mountains. Small settlements on the plateaus or in the river valleys alternated with grasslands, arable lands, extensive forests and sandstone formations. It is a manifold landscape which is rarely found in other regions. A Saxon interview partner admired that new views unfold within a few minutes if one discovers the landscape by walking. Another interviewee stated that the mountains and look-outs offer a nice overview of the landscape and clearly reveal its geomorphology.

„Often the term ‘park’ is understood as something like a well-kept urban garden where each path is swept. Some people also think that such a national park should be cleaned like that. Protected landscapes should better get back to their original state like virgin forests, today or rather near-natural forests.”⁵ (Interviewee from North Bohemia)

It was said that artificially designed parks and green spaces could rarely be found in rural areas like the Elbe Sandstone Mountains. The spa gardens in Bad Schandau/DE or the palace gardens in Děčín/CZ or Jílové/CZ were referred to as examples of green spaces in more urbanized areas, but they were scarcely frequented by the interview partners living near these places. In the villages of Saxon Switzerland, the cemeteries were important green spaces and also meeting places for inhabitants. Three respondents perceived the whole landscape of the Elbe Sandstone Mountains itself as green space for local recreation. They went hiking and rested on a bench with a view over the land. Some complained that meanwhile those recreational places had become overgrown so they lost the nice views.



Meeting places for inhabitants – cemeteries in Jetřichovice/CZ (left) and Reinhardtsdorf/DE
Photo: Anke Hahn

A number of interviewees regretted that the traditional orchards and vegetable gardens did not exist anymore. Former utility gardens had become overgrown because it is no longer necessary to utilize the land to produce fruit or vegetables – food can be bought from the supermarket – or they had been converted to well-kept ornamental gardens. Where once a garden had been, there now stood a

⁴ Original citation: „Die Sächsische Schweiz ist eben nicht eine wilde Landschaft, sondern das ist eine Kulturlandschaft. Und dieser Wechsel zwischen Offenland und diesen Wald-Fels-Bereichen, den find ich großartig. Das ist eben auch das Schöne. Das ist eine Landschaft, in der man leben kann.“

⁵ Original citation: „Unter Park versteht man meistens einen Stadtpark, der schön gepflegt ist, wo jeder Weg gefegt ist. Manche Leute sehen auch so einen Nationalpark (...), der Park sollte auch so gereinigt sein (lacht). Im Gegenteil, die geschützte Landschaft und der Naturschutz sollten eigentlich den Ursprung wieder bekommen. Also Urwälder, nicht mehr im wahrsten Sinne des Wortes – Urwald hat man nur einmal, aber naturnahe Wälder.“

house or there was just a lawn which is easy to maintain. A few interviewees assumed that the reason could be that many houses in the North Bohemian villages were used as weekend cottages. The owners often came from Prague to rest for the weekend and to have less work with the garden. Some interview partners noticed that people rediscovered growing vegetables to show their children where the carrots and lettuce come from.



Fruit and vegetable garden in Hinterhermsdorf/DE with a view in direction of the Lusatian Mountains. Photo: Anke Hahn

3.1.3. The direct and indirect knowledge of the ecological network

Most of the respondents were not familiar with the technical term “ecological network,” except two interviewed persons who had worked in the field of nature conservation. They had already heard of this term but it did not describe an important concept for their work. The interviewees less perceived a network of ecologically valuable areas penetrating the landscape. Instead they saw landscape as a whole, embracing natural and cultural heritage of the region coevally. While talking about landscape change, the interview partners indirectly mentioned elements which are decisive parts of the regional ecological network in the border area, e.g. green spaces within settlements, extensively used meadows, edges between forest and open land and hedge rows giving a spatial structure to the former open landscape. They did not see the trans-boundary National Park in Bohemian-Saxon Switzerland as core area of the regional ecological network. For them it depicted less an instrument of nature conservation rather an area of high tourism value, a destination where one could hike, bike and relax but preferably without any constraints because of nature conservation.



Important elements of the regional ecological network – extensively used meadows in Waitzdorf/DE (left) and meadows along the river Kirnitzsch/Křinice Photo: google panoramio/S. Goldhardt

3.1.4. Perceived environmental problems, landscape degradation and conflicts

Two local witnesses in Saxony complained about the increasing traffic in the region. Although tourism is a fundamental economic pillar in the Elbe Sandstone Mountains, it also brought heavy traffic, noise and pollution. Emissions and increasing soil sealing due to new settlement and traffic areas negatively influenced the environment. It was indicated that the trees along the main roads became increasingly damaged.

Nonetheless, many respondents agreed that compared to former times with high emissions from the brown coal factories, the air quality is much better today. Through tightened regulations of the European Union importance was attached to environmentally friendly technologies like air filters etc. Most of the private households heated with oil or gas. People also went back to coal as a relatively cheap fuel. But for nearly all interviewees, the forest decline due to sulphur dioxide emissions to the air was past history. The bark beetle was not a big threat for the trees anymore, although a few silvicultural concepts increased the possibility of a potential attack by planting spruces on places where it was clear that the trees would not become very resistant.

A Czech respondent said that during the socialist era lots of chemicals had been used for agriculture and caused much higher pollution of soil, vegetation and water bodies than today. Industrial plants which had been situated along water courses, e.g. the old dipper factory in Krásná Lípa/CZ or the paper mill in Sebnitz/DE, had directly poured their sewerage into the rivers. An interviewee said that between the 1950s and '1970s it was reported that many animal species had disappeared from the area, e.g. the peregrine falcon for which the Elbe Sandstone Mountains were the optimal habitat. In the 1990s that species was successfully resettled in the area.

3.1.5. Perception of the “other side of the border”

Three contemporary witnesses from Saxony remarked that the Elbe Sandstone Mountains formed a landscape entity. It would not become visible that two nations shared that area. Until the end of the Second World War, there had been no big differences between the shape of the cultural landscape in Saxony and in North Bohemia. As landscape development was closely related to the political and socio-cultural conditions, there was a serious break after the displacement of the German population from North Bohemia.

*“(...) and when 3.5 Mio. people disappear from a country, then it is mirrored in the landscape. The difference is after 1945, when you look at both landscapes, (...) it has developed completely different in Bohemia. Many houses have broken down (...), also small settlements were practically erased from the landscape, the villages were wasted, small monuments destroyed, meadows and walking paths overgrew (...) and also the cities were quite degenerated.”*⁶(Interviewee from North Bohemia)

A Saxon interviewee mentioned that forestry on the Bohemian side had more problems with invasive tree species like Douglas-fir (*Pseudotsuga*) and Eastern White Pine (*Pinus strobus*), which had been brought by the former Duke Kinsky from America in the beginning of the 19th century. Originally, the Eastern White Pine should have been served as pre-plantation for spruce, but it had asserted itself. In North Bohemia much more spruce was afforested than in Saxony during the last century.

⁶ Original citation: „(...) und wenn natürlich aus einem Land 3,5 Millionen Leute verschwinden, dann spiegelt sich das auch in der Landschaft wider. Der Unterschied ist nach 1945, wenn man die beiden Landschaften betrachtet, (...) hat sich das in Böhmen bedeutend anders entwickelt. Viele Häuser sind eingefallen, (...), auch kleine Siedlungen wurden praktisch ausgeradiert aus der Landschaft, die Dörfer wurden verwüstet, Kleindenkmäler kaputt gemacht, Wiesen vergrast, Wege verwachsen (...) und auch die Städte sind ziemlich verkommen.“

In the Bohemian part of the Elbe Sandstone Mountains, relicts of the former agricultural production cooperatives extremely devaluated the landscape - a Saxon respondent regretted. The small villages in the Bohemian border area dominated by agriculture were still far from tidiness and order, she noticed.

Following the border line in the area of Hinterhermsdorf/DE, one could recognize the different forms of land use, said a Saxon interviewee. While more fields were cultivated on the Saxon side, more meadows existed on the Czech side of the border. He declared that the size of some Saxon farmlands could have never been achieved within the agricultural system of Czechoslovakia due to topographic constraints and structural conditions. While most of the land owners in Saxony had received back their land and again had rented it the newly founded agricultural cooperatives after Germany's reunification, there had not existed any similar kind of institution in Bohemia which would continue to cultivate the fields.

On the Bohemian side, the "Umgebinde" houses had their special charm, meaning much to a Saxon interview partner. The houses were not so "*dead reconstructed*" as was the case in Saxony. For the some people from Saxony they looked perhaps untidy and sloppy, but exactly those characteristics stood for the authenticity and history of those house forms.

The Catholic past of Bohemia became visible at many places in the landscape, an interview partner from Saxony stated. In this regard he mentioned the wayside crosses carrying a rich cultural heritage. They often stood at remote crossroads in Bohemian Switzerland. Even today religious Stations of the Cross and mountain churches, as former places of pilgrimage, appear at some places in the landscape. In the past those places had been accessed by the people over pilgrimage routes on religious holidays or celebrations.



Relicts of the Catholic past of Bohemia: church of pilgrimage near Lobendava/CZ (left)
and Stations of the Cross in Jiřetín pod Jedlovou/CZ
Photo: google panoramio/ kobasian and Navi Abdavsen

3.2. Sopron basin, Fertő/Neusiedlersee, Hanság – Project region Central-South

3.2.1 The boundaries of the landscapes

The method of asking interviewees to draw the boundaries of the landscape was different on the two sides of the border. In Austria people were requested to describe what they consider as "their landscape." In Hungary mental maps were used. Interviewees were asked to delineate the boundary of the landscape concerned on a map sketch and it was evaluated with GIS.

In Austria the approaches and the perception of one's own landscape varies considerably both in the real extent and the idea behind it. The smallest units mentioned were houses and the gardens around

them. That is the plot that is owned, which is entirely under control of the person. From this personal perspective one's own landscape extends until the visual horizon. Three approaches came up most frequently. One is the area, that is used, that is managed by the person. These are the gardens, the vineyards, and the arable fields. The second is the visual boundaries, the area that can be overviewed into the far flatland or until the mountain range. The limits of a landscape can be not only visual in the broader surroundings but also a natural feature that is a barrier to passing through, e.g. a lake, or a mountain range. These considerations basically define the area that Austrians call homeland. Another idea shared by some people draws limits at the administrative borders of the settlements. We have to add that experts made delineations according to climatic conditions and hydrology as well. It is an interesting phenomenon that some geographical units such as "Seewinkel" or "Heideboden" are differently considered and the villages belonging to one or to the other alter sometimes.

It is clear that the territories that have been identified in Austria as "my landscape" are areas of interaction of two types. One is the interaction by physical activities; the other is the interaction by perception. The two are aggregated in people's mindscape and are called homeland. Thus "my landscape" is the place where people feel at home!

In Hungary the boundaries of the landscapes vary considerably according to the mental maps. Most people drew the boundary of the geographical landscape in the case of Fertő and the Hanság basin. When describing the surroundings of the town Sopron, people's delineation of the "landscape of Sopron" was fully different from the natural geographical units. It is because this area is a composite of several natural geographical units (the Sopron Mountains, the Sopron-basin, the Ikva floodplain, and the Fertő Hill range). In the citizen's mindscape, the areas that are frequently visited belong to the landscape of Sopron. So for many residents Lake Fertő is part of their landscape although the area around the lake was closed for a long time. On the contrary, for a smaller proportion of the inhabitants around Lake Fertő, Sopron belongs to the Fertő landscape (Figure 9).

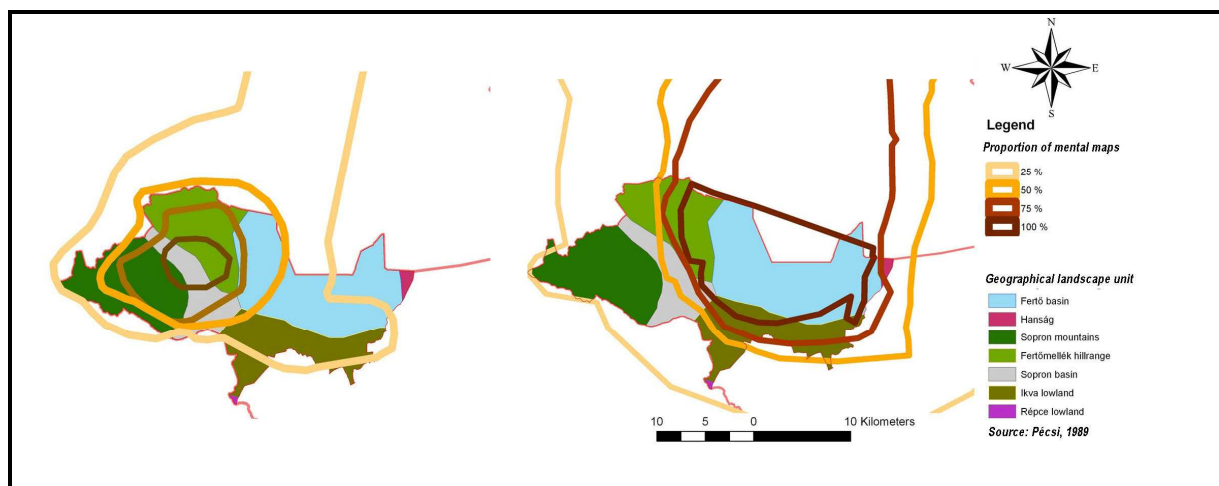


Figure 9: Mental maps and landscape micro-regions in Sopron (left) and Fertő landscape (right)

Layout: Ágnes Tirászi

The phenomenon in Hungary is similar to Austria, showing the importance of personal connections to places, that has more significance than the proper biophysical circumstances. The area of world heritage cultural landscape coincides with the delineation of people's Fertő landscape.

The mental maps in Hanság show a rather different picture; the border-line is less clear. It is explained by the fact that for many people, Hanság means the old marshland. Therefore people living in the area cannot really identify themselves as real inhabitants of "Hanság."

Another reason is that smaller geographical units, such as Tóköz on the eastern part, are distinguished by people and finally the transformed landscape today does not have a really unique character compared to the neighbouring geographical landscapes, such as “Moson flatland” and “Rábaköz.”

Mental maps of the obvious division of Fertő and Hanság landscape show that people today have adapted to the transformed and really divided landscape. Only few interviewees see a connection or unity in the Fertő-Hanság basin, despite it having once been an interconnected marchland (Figure 10).

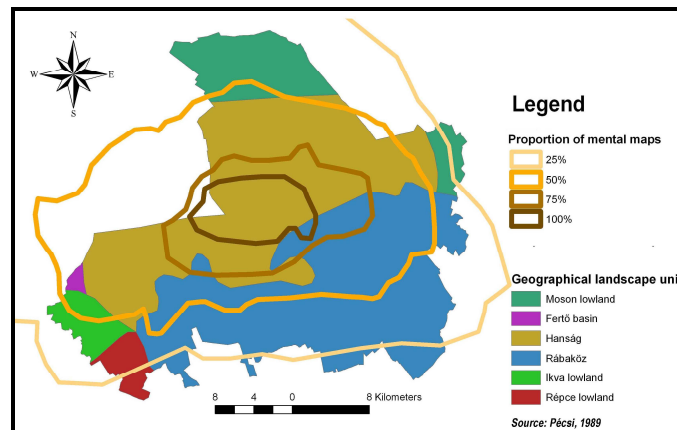


Figure 10: Mental maps and landscape micro-regions in Hanság

Layout: Ágnes Tirászi

The Austrian division of the project region, made by experts, clearly identifies two area units: the western and the eastern part of the lake. This delineation reflects both the natural geographical endowments and the characteristic land uses. In the further part of the present study, the western part in Austria is compared with the Sopron-Fertő landscape and the eastern part in Austria that consists of the lake shore, the Seewinkel, the Heideboden and of the Hanság/Waasen is compared in Hungary with the southeastern lake shore and the Hanság.

3.2.2. The perceived character and valuable landscape features

Main characteristics of the western part of the area (from the Sopron Mountains towards the Western shore of Lake Fertő)

Interviewees in both Austria and Hungary highlighted the transitional character of this area where the foothills of the Alps and the Pannonian flatland meet. It means a change in the relief and climate. The transitional landscape is highly diverse, complex, and rich in different habitat/land-cover structures. It is a combination of mountains, hills and basins. The harmonious co-existence of forests, vineyards, gardens, reeds and settlements provides a unique sense of place.

*“A harmonious aggregate of hills, mountains and waters..”*⁷ (Interviewee from Sopron)

Austrians mentioned the small vineyard parcels, the natural elements as valuable features, e.g. wet and dry grasslands on the foothills and on the slopes. Hungarians focus more on the cultural elements, (emblematic buildings in the city of Sopron and the castles in the surroundings, the Gloriette in Fertőboz, constructions of viticulture, villas), when talking on the particularities of this western area. The atmosphere of the historic town was also often mentioned by the citizens of Sopron.

⁷ Original citation: „...harmonikus összessége a domboknak, hegyeknek, erdőknek, vizeknek...”



Sopron, historical downtown
Photo: Ágnes Tirászi

The significance of nature and the scenic value of the landscape are well shown when interviewees describe their favourite places. Both Austrians and Hungarians highlight the look-out towers and the spots with scenic views, e.g vineyards on the hill slopes with nice panoramic views of the lake, as well as walking paths and nice natural spots or parks. These places are mostly related to recreational activities. Some are absolutely delighted by the beauty of the landscape.

“...the landscape is so beautiful that it is a pride to live here ” (Interviewee from Sopron)⁸



Panoramic view of the “Lower Lőverek” and the historical part of Sopron
Photo: Éva Konkoly-Gyuró.



View from Wagram towards the lake Fertő (left) and reed-belt of Lake Fertő (right)
Photo: Sonja Völler

“The sunset over the lake or ice skating in the so called „Schluichten”, the narrow paths throughout the reed belt – that’s something truly beautiful.” (Interviewee from Rust)⁹

⁸ Original citation: „... itt élni is büszkeség, annyira gyönyörű vidék....”

Main characteristics of the eastern part of the area

The eastern flatland, connected to Hanság represents a fully different landscape type that is well expressed by the interviewees, although less common opinion could be found in the Austrian and the Hungarian parts. Firstly, because Hungarians clearly differentiate between Fertő and Hanság, secondly, because the plain itself is not a curiosity in Hungary but it is absolutely unique in mountainous Austria.

For Hungarians it is the atmosphere of Sopron which is unique, as we have seen in the previous chapter; in Austria the ambiance of the open landscape is amazing for most of the interviewees. The distant flatland, being unique in Austria is expressed with the terms: the infinity, the absolute flatland, the endless farness ("die *Endlosigkeit*," "die *reine Ebene*," die „*unendliche Weite*.“) They also mentioned the strong water connection. An interesting visual aspect is the special light conditions in the area as a consequence of the openness, the emptiness, and the almost entire lack of forests. One respondent indicated that despite the overall flatland, there are many differences in fine-relief (small elevations and depressions) that allows a high diversity in habitat structure, e.g lakes of Seewinkel, and wetlands of Hanság.



Wetlands in Hanság, Földsziget
Photo: Ágnes Tirászi

In Hungary an interesting phenomenon was that most people talked of the water rich, past landscape when we asked about the characteristics of Hanság. It is clear that the Hanság means the deep wetland in the minds of most people. Predominantly the elderly people, over 70-80 years, describe a landscape that existed in their childhoods although today only few patches remain. They talk about an untouched, peaceful, and calm landscape. The once famous hay of "Hany," the main product of the area, the dispersed furze bushes was often referred to as well as the wet alder forests and the new extensive poplar clone plantations. Although the large arable fields (that is in fact dominant the land use today) were not frequently mentioned.

Common characteristics of the whole project region

Lake Fertő lies in the heart of the project region, at the deepest elevation. The water, the immense reed belt, the rich bird fauna and the naturalness are characteristics perceived by most people. The impact of the lake itself radiates outward. It influences the climatic conditions, creating the mild climate that is favourable for viticulture. It is an important recreational area for the citizens of Vienna. Generally in the eyes of the Austrians, the touristic function of the lake and the surroundings are more appreciated. For most Hungarian interviewees "Fertő" is still an undisturbed, quiet and natural area due to the Iron curtain zone which hindered the transformation of the landscape after the Second World War.

⁹ Original citation: Der "Sonnenuntergang auf dem See oder Eislaufen in den Schluichten [Schilfkanäle], also in den schmalen Wasserwegen zwischen der Schilflandschaft - das ist etwas ganz Schönes"

3.2.3. The direct and indirect knowledge of the ecological network

The inquiries clearly showed that the technical term “ecological network” is poorly known; only one-third of the Hungarian interviewees and a half of the Austrian have heard about it. Austrians mostly thought of hunting and wildlife corridors, of hedgerows and forest belts serving as protection against the wind. Thinking on a territorially large scale, the need for cooperation in agriculture, nature conservation and tourism, and the conceptualisation future strategies as well as the significance of border-habitats, the ecotones and the stepping stones for characteristic species were also mentioned.

In Hungary, non-professionals have almost no idea about the ecological network and even professionals hold a different understanding about it. We obtained more relevant answers after we asked about landscape elements that can have a positive impact on nature. Mostly waters (lake, wetlands, springs, streams), forests, and forest belts were mentioned. The larger green areas (parks, and castle gardens) are well known but neither these, nor the cemeteries and the gardens around the houses were connected to the ecological network in the eyes of the people.

3.2.4. Perceived environmental problems, landscape degradation and conflicts

The picture drawn by Austrians partly coincides with the Hungarian view. Both in Austria and Hungary the majority of the interviewees think that there is no major environmental pollution because fortunately industrial development was not prevalent in this rural borderland and in Sopron the former factories were closed. A common opinion in both counties is that air pollution and noise caused by growing traffic has become ever more disturbing in the settlements and the motorway on the Plateau of Parndorf – while necessary – has negative impact on the wildlife.

Landscape degradation is seen similarly in Austria and Hungary in the western sector of the area. The transformation in the style of new architecture, the lack of respect for the traditional building styles and the expanding new modern residential areas are considered an important problem. The waste deposited illegally in the landscape and the abandonment of cultivated areas are more serious problems in Hungary, but is perceived in both countries. In Austria, people complained about the noise caused by power-boats, and about soil erosion and the loss of valuable nature habitats, e.g. dry grassland, as well as the expansion of the reeds from the lack of grassland management. In Hungary, water pollution from chemicals, the lack of reed cutting and management, the abandonment of the pastures and the spontaneous expansion of shrubs were mentioned.



Expansion of residential areas in Austria (left) and in Hungary (right)

Photo: Thomas Wrbka, Ágnes Tiráski

In the eastern part of the study area, the most frequently mentioned problems were related to domestic water, the quantity and quality of water, the depression of the ground water table as a consequence of draining and the 5,000 illegal wells in Austria together with the growing need for

irrigation and insufficient waste water management. The fragmentation of natural habitats was also considered as a negative process.

In Hungary, there are several conflicts between the official nature conservation and the local population. The communication from the National Park does not make local people act as partners, although they have considerable knowledge of the landscape and a strong attachment to their homeland. Interviewees sometimes referred to a serious lack of understanding, even though they often had common goals.

3.2.5. The perception of the “other side of the border”

It is very instructive to collect information on the perceptions of Austrians and Hungarians about the other side of the border, and their opinions about the neighbouring landscape.

Austrians mentioned two typical features of the Hungarian area. One is the intensive agriculture with large homogenous fields and the second is the extensive wilderness, less management, more abandonment of the areas that results in more naturalness within the landscape. Although these statements seem to be contradictory, in fact both occur in Hungary.

„Here it's like – well, people want everything to look perfect – in Hungary it's not like that. I hope that what happened in Austria won't happen there! That's the difference: Here people think everything has to look perfect, in Hungary it's different. That's why I like the landscape there much better, because it's less perfect.”¹⁰

Austrians mentioned the nice natural areas in the Sopron Mountains and the greater remaining wetlands around Lake Fertő, the marshland and alder forest in the Hanság.

Hungarians have the same opinion, they think that in Austria everything is less natural, very well kept, the fields, the roads, and the settlements. People respect the land, agriculture is much more valuable and the infrastructure is much better than in Hungary. Interestingly, an Austrian warned us not to make the same error in Hungary for what is so much appreciated by Hungarians.

„... that people don't make the same mistake we did.”¹¹

Interviewees in both countries see that the landscape in Austria is more finely structured, the well managed parcels of vineyards and arable land are significantly smaller, the pastures are used by livestock grazing, and reeds are well managed.

Austrians value the smaller and more modest buildings, the traditional character of the villages, that have been better preserved in their opinion. However they also see that the roads in Hungary are not well kept. Hungarians value the order, the cleanliness, the good maintenance of the buildings and villages in Austria.

Some interviewees in both countries are convinced that the landscape, that was once a unified unit, is growing together again and the differences are disappearing.

„I think that we'll all grow together here in the future... I think what nature has created, man cannot take apart, because the mountain doesn't simply cease at the border and that hill range there stretches further into Hungary...” (Interviewee, western shore of Neusiedlersee)¹².

¹⁰ Original citation: "Bei uns is ja so - ma will alles pikobello haben. *...+ *In Ungarn+ is ja so - da is das noch nicht so weit. Ich hoff nur, dass das nicht auch passiert! Das is der Unterschied. Bei uns meint ma, ma muss alles g'schert haben und dort unt' is das nicht. *...+ Dafür g'fallt's ma dort unt' wesentlich besser, weil's nicht so g'striegelt is"

¹¹ Original citation: "...dass man den Fehler nicht macht, wie bei uns".

¹² Original citation: "I glaub, dass ma da jetzt in Zukunft einfach z'ammwachsen wird -.... I glaub, was die Natur g'macht hat, des kann der Mensch net auseinander nehmen, weil der Berg geht ganz einfach durch und der Hügelzug zieht sich dort nach Ungarn weiter..." (Interviewpartnerin, Westufer Neusiedler See).

„it will grow together, which used to belong together”¹³. (Interviewee from Sopron)

It is a general view that the remains of the borderline itself, that had been the strongly closed “impermeable” Iron Curtain is gradually disappearing and is almost no longer visible.

„The border becomes more and more ethereal, actually becoming less important”¹⁴.

3.3. Őrség/ Goričko –Project region South

3.3.1. The perceived character and valuable landscape features

According to Hungarian respondents, Őrség has an individual atmosphere with its gentle hills, and almost pristine landscape, a “hilly, wonderful world, slashed by meadows and fields” (Interviewee from Őriszentpéter)¹⁵.

There are many forests and meadows and owing to the wet climate, plants are bounteous and bright green coloured. Because of the clayey soil and the climate, rainwater accumulates in excavated holes, known as ‘tóka.’ These little pond-like formations were formerly used for watering livestock or domestic washing.

“Beautiful texture of various things” (Interviewee from Őriszentpéter)¹⁶



Landscape near Szalafő
Photo: Pál, Balázs.

Beside natural endowments, cultural heritage is also well represented by many characteristics mentioned by respondents. The most frequent cultural elements are the settlements, creating a unique appeal with their special, log houses and ‘kódisállás’ buildings, barns, and unenclosed estates. “Traditional architecture has remained; there is a kind of continuity with the past” (Interviewee from Őriszentpéter)¹⁷. Settlements in Őrség consist of the so called ‘szer,’ which means a cluster of houses on a hill top. Pumpkin production is also popular representing an individual feature in this landscape, which contributes to one of the ‘gold of the Őrség,’ pumpkin-seed oil.

This perception of landscape uniqueness is also represented in personality of the people living in Őrség. People are modest, unaffected, friendly, attached to their motherland like nowhere else. They like the freedom, the limitless space generated by the landscape. “The Őrség is totally different...estates are larger in the villages, houses are farther from each other; they have space.

¹³ Original citation: „Újra össze fog nőni, ami régen összetartozott.”

¹⁴ Original citation: „Egyre inkább légiessé válik a határ, igazából egyre kisebb a jelentősége.”

¹⁵ Original citation: „Dombos, rétekkel, mezővel szabdalts csodálatos világ.”

¹⁶ Original citation: „Sokrétű dolgoknak a szép szövedéke.”

¹⁷ Original citation: „A népi építészet megmaradt, van egyfajta folytonosság a múlttal.”(

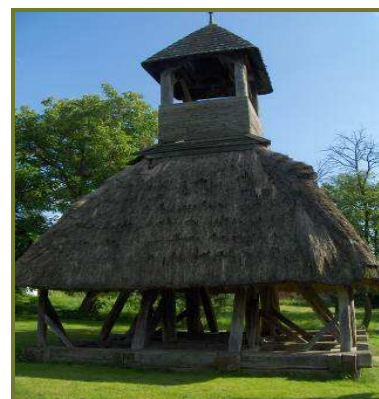
There is a lot more greenness here, forest is spreading into the villages. Enormous meadows are breaking up the village.” (Interviewee from Óriszentpéter)¹⁸.



Church in Velemér
Photo: Pál, Balázs



Log house in Szalafő
Photo: Pál, Balázs.



Bellfry in Pankasz
Photo: Pál, Balázs .

The intensity of green color in the Őrség landscape was emphasised by respondents: *“Here, even the green is different”* (Interviewee from Óriszentpéter)¹⁹. *“It has some magic...if it touches you, you will come back”* (Interviewee from Óriszentpéter)²⁰.

The majority of the Slovenian respondents also emphasized some cultural and natural characteristic of the landscape. Respondents mentioned different cultural monuments of historical and religion value, such as the Plečnik church in Bogojina, the historic Rotunda church in Selo, crosses and other religious symbols. They also mentioned traditional Pannonian houses covered with straw. A 71 year old pensioner interviewed also described the traditional farmsteads.

“In 1960s and 1970s traditional Pannonian houses dominated in Črenšovci. Today are all gone. Houses were made of wood, some even from the earth. They were covered with straw, and later also with the brick. The houses were L-shaped - first inside was the residential building, followed by an outbuilding. The residential part had one large room and a black kitchen. In these two rooms there were important pieces of furniture – a bench, an extendible table, religious statues and paintings. In the house there was also a “little room” where the grandparents lived. This room was then followed by a storage room.”²¹

Among natural characteristics mentioned by Slovenian respondents were the hills and plains as the two most dominant natural characteristics of the Pomurje landscape mosaic. There are substantial differences between the northern and the southern districts of Pomurje concerning landscape patterns and mosaics. Most respondents highlighted such differences and pointed to what they regard as being the underlying contributing forces. Hence, it is instantly understood that the geomorphology of the two areas has contributed significantly to their different land-use patterns.

¹⁸ Original citation: „Az Őrség egész más...sokkal szellősebb. Az itteni falvakban nagyobbak a porták, a házak messzebb vannak egymástól, levegősebb az elrendezés. Sokkal több a zöld, az erdő jobban bekúszik a falvakba. A hatalmas rétek feldarabolják a falut.”

¹⁹ Original citation: „Itt még a zöld is más.”

²⁰ Original citation: „Valami varázsa van...ha megfogja az embert, akkor az visszakívánczik.”

²¹ Original citation: “V letih 1960 in 1970 prevladujejo tradicionalne panonske hiše v Črenšovcih. Danes tega ni več. Hiše so bile včasih narejene iz lesa, nekatere celo iz zemlje. Bile so pokrite s slamo, kasneje pa tudi z opeko. Hiše so bile v obliki črke L - prvo v notranjosti je bila stanovanjska stavba, ki ji je sledilo gospodarsko poslopje. Stanovanjski del je imel eno veliko sobo in črno kuhinjo. V teh dveh sobah so bili pomembni deli pohištva - klopi, raztegljiva miza, verski kipi in slike. V hiši je bila tudi “majna soba”, kjer so živeli stari starši. Temu prostoru je nato sledil skladiščni prostor.”



Church in Selo, Pomurje
Photo: Gregor Torkar



Traditional Pannonian house
Photo: Gregor Torkar



Fields in Prekmurje Region (SLO)
Photo: Gregor Torkar

In the south, the region is characterized by a lowland with fertile soil, access to water and the possibility to cultivate sizable fields. This region and the lowland in particular, have been, and are still used for agricultural production. In the past this involved the cultivation of potatoes, pumpkins, wheat, millet, corn and buckwheat used for food production, while more recently there is a growing interest in crops such as rapeseed used in the energy sector (biodiesel). In the past flax was also commonly produced for textiles. On the other hand, in the north, the hilly landscape (Goričko) attracted a different kind of land-use. Here it is common to find orchards, pastureland, community-owned forest, fields of pumpkins and recently vineyards. A 48 year old agronomist (48 years old) explained why today the

*"Goričko (area) is almost without cows. Farmers mow grasslands because of subsidies for agriculture. They became a utility service that prevents overgrowth of farmland. I know that 97% of all farming in this area is just a utility service. Farmers kept their tractors and mulches. They sold the rest of the equipment. They do this only because it is paid and worth doing at the moment."*²² (Interviewee from Topolovec).

²² Original citation: " Goričko (območje) skoraj brez krav. Kmetje kosijo travnike zaradi kmetijskih subvencij. Postali so uporabna storitev, ki preprečuje zaraščanje kmetijskih zemljišč. Vem da 97% vseh kmetovanj na tem območju je le uporabna storitev. Kmetje hranijo svoje traktorje in zastirke. Ostalo opremo so prodali. To počnejo samo zato, ker je plačano in vredno početje v tem trenutku."

People living in Őrség are proud of these unique characteristics and the harmonious connection between people and nature. They speak with the same enthusiasm about beauties of the natural environment and about their farming traditions or architectural heritage. *(The landscape is) "mine...ours...we have grown together with the landscape. It is written on us, on our shape, it is reflected by our language, our dialect, our tone"* (Interviewee from Nagyrákos)²³. They highlighted the settlements with their specific structure, their ancient churches and their belfries as significant landscape elements. They are devoted to their little properties and they are proud of the local people, their kindness and hospitality. *"I would not go from here not for anything on earth"*²⁴. The most beautiful place for the respondents is settlement of Szalafő, which has largely saved its settlement character, its culture and the village community. *"I like the whole of it"* (Interviewee from Óriszentpéter)²⁵.

Pomurje respondents are also proud of the appearance of their landscape, particularly along the Mura River and the hills of Goričko. Those living along the Mura mentioned the natural beauties of the river, such as the riparian forests and backwaters. The respondents living along the Mura and the Kučnica Rivers mentioned the wild daffodils (*Narcissus poeticus*) as a symbol of pristine nature. However, a respondent living near the Mura River pointed out some negative impacts of the degradation of landscapes; *"Some people are cutting down hedges. As a consequence the wind and the floods are washing the soil away. Errors were also made by foresters who cleared an area of trees that were important as wind protection. In 1970s and 1980s farming cooperatives had money to consolidate the land and drain the water. Land consolidation is still going on in agriculture and they do not promote the conservation of nature. Fortunately thinking farmers are maintaining most of the hedges"*²⁶ (Interviewee from Veržej).

The people of hilly Goričko like the undulation of the landscape, the mosaic of crops and they are proud of their old trees – chestnuts and oaks. They appreciate the consistency and openness of people and places arranged in harmony with nature. They also value the preservation of traditions and cultural patterns related to food, music and traditional crafts. A respondent from Cankova (64 years of age) said that *"everything should stay as it is now. Young people should be motivated to stay here... I am also afraid that cultural landscape will disappear if only big farms remain and there will be no diversity."*²⁷



Landscape near Hodossy (SLO)

Photo: Pál Balázs

²³ Original citation: „Az enyém... a miénk... összenőttünk a tájjal. Ránk van írva, a testalkatunkra, tükrözi a nyelvünk, a nyelvjárásunk, a hanghordozásunk.”

²⁴ Original citation: „El nem mennék innen a világ minden kincséért sem.”

²⁵ Original citation: „Az egészet szeretem.”

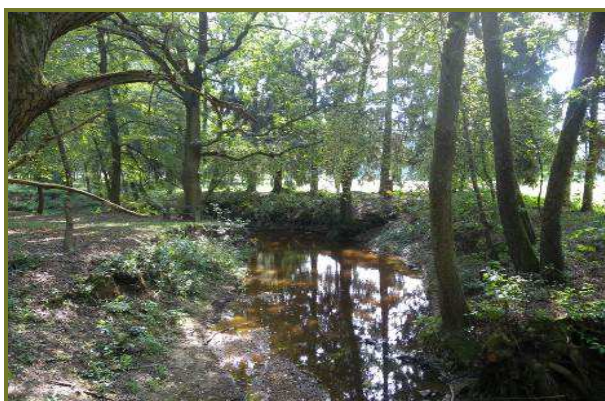
²⁶ Original citation: " Nekateri ljudje sekajo žive meje. Posledica je, da veter in poplave ispirajo zemljo . Napake so tudi s strani gozdarjev, ki so očistili območje dreves, ki so delovala kot zaščita proti vetru. Leta 1970 in 1980 so kmetijske zadruge imele denar za utrđitev zemljišča in odtekališča vode. Komascije še vedno dogajajo na področju kmetijstva in ne spodbujajo ohranjanja narave. Na srečo zdrava logika kmetov ohranja večino živih mej. "

²⁷ "vse naj ostane tako, kot je zdaj. Mladi morajo biti motivirani ostati tukaj ... Bojim se tudi, da bo kulturna krajina izginila, če bodo le velike kmetije ostale in ne bo raznolikost."

3.3.2. The direct and indirect knowledge of the ecological network

An important place of interest in the Pomurje region was the designation in 2003 of a protected area, the Goričko Landscape Park. This park was the result of a bottom-up initiative that show how to cope mentioned problems. The mandate of the park authority is to protect the natural environment while keeping in focus the development needs and current issues of this area. There are several initiatives that the park authority undertake such as activities awareness, respondents have generally expressed detachment from the park and did not seem too confident in its achievements. Most frequently they have mentioned restrictions and additional bureaucratic procedures now required for land purchases.

Parks are not common in the villages of Órség, and only a few settlements have a park: Óriszentpéter, Szentgyörgyvölgy, Nagyrákos, Bajásenye. A 50 year old respondent said that *“the whole Órség is a park”*²⁸ for her (Interviewee from Bajásenye). Instead, respondents mentioned particular parts of the forest, a forest picnic or resting area, for example: forest parks by Óriszentpéter and Himfa, the forest resting areas by Haricsa and Szakonyfalu or the resting place beside Lake Bárkás.



Park at the Szala stream in Óriszentpéter
Photo: Pál Balázs



Forest picnic area near Ispánk
Photo: Pál Balázs

Cemeteries are significant in Órség because of memories not because of their role in the green space system of the settlement. Popular cemeteries are in Velemér (headboard cemetery), Kercaszomor “sökfás” cemetery, where the headboards are made from oak trees; and the “Pusztá” cemetery. Respondents highlighted the natural beauty of the cemeteries in Viszák and Szentgyörgyvölgy. Cemeteries are well managed in general and they have a significant green surface.

Respondents in Pomurje recalled that in several villages there is more than one cemetery, e.g. both Roman Catholic and Protestant. In the past there was also a strong resident Jewish community. A respondent (32 years old) explained that in *“Separated cemeteries existed in Bodonci until 1925..., but after that they formed only one cemetery for all.”*²⁹ (Interviewee from Bodonci).

²⁸ Original citation: *“Nekem az egész Órség egy park ”*

²⁹ Original citation: *“Bodoncih so ločena pokopališča obstajala do leta 1925..., potem pa so ustanovili le eno pokopališče za vse.”*



Ancient small-leaved lime tree in the cemetery of
Kercaszomor (HU)
Photo: Pál Balázs



A magnificent old mature oak at a hill top cross
roads point in north-central Goričko (SLO)
Photo: Gregor Torkar

Pomurje respondents are very proud of their urban parks and solitary old trees (chestnut, oak and poplar trees) that are protected as natural heritage units. An interviewee from Cankova said that *"everything should stay as it is now. Young should be motivated to stay here... I am also afraid that cultural landscape will disappear if only big farms will remain and there will be no diversity."*³⁰

Gardens in Őrség consist of three areas: a front garden, a fruit garden and a vegetable garden. In the front garden people generally plant flowers and beside older houses this garden also contains vegetables, which people use for cooking. This front garden is disappearing now and it is being replaced by lawns and ornamental shrubbery. Adjacent to the houses there are fruit trees including: apple, prune, and pear trees. These orchards are old; people do not plant new ones. The grass under the fruit trees is mown, which is also typical in Őrség. Around the houses you can always see some vine roots. The vegetable garden (called the ground plot) is usually situated in the end of the estate, behind the house. The significance of the vegetable garden is decreasing. They being replaced by lawns. Nowadays there are fences around domestic gardens.



Orchard in Kerkafalva (HU)
Photo: Pál Balázs



Front gardens in Hegyhátszentjakab
(HU) Photo: Pál Balázs



Garden with grass and thuja in
Őrszentpéter (HU)
Photo: Pál Balázs

Respondents from Pomurje also reported having small vegetable gardens with herbs and flowers where plants were grown that were frequently needed in the kitchen. Each garden had a fence, to prevent the ingress by domestic and wild animals. The fences were built of wood or woven from

³⁰ Original citation: " Vse naj ostane tako, kot je zdaj. Mladi morajo biti motivirani ostati tukaj ... Bojim se tudi, da bo kulturna krajina izginila, če bodo le velike kmetije ostale in ne bo raznolikosti. "

wicker, but nowadays iron fences are mostly used. Houses are also surrounded by orchards. Respondents see far fewer traditional gardens in the villages, because increasingly people buy vegetables and fruits in shops. The gardens are used more frequently for flowers. Lawns are also common around the houses and this was not a typical practice in the past.

Őrség respondents highlighted the positive effects of water surfaces, fountains and the “tóka” (small ponds) in the yards of the houses. These provide habitat and they have positive effect on the local climate. They highlighted the Szala (Zala), the Lugosi and the Kerka streams. *“The river Zala gives habitats and it has refreshing effects on the landscape”* (Interviewee from Őriszentpéter)³¹. Among lakes they mentioned the fishing lake beside the Himfa forest park and the Hársas Lake beside Máriaújfalu. They also like ancient, undisturbed forests such as the beech forest beside Kercaszomor. They think that mowing the meadows and the spreading of forests is also positive.

In contrast, the majority of respondents from Promurje emphasized negative impacts on the natural environment. They mentioned the regulation of watercourses, gravel quarries and the abandonment of small farms as the most negative impacts on nature. *“Many rivers and streams were regulated and river banks are regularly mowed”*³² (Interviewee from Ratkovci).



The Kučnica River which has suffered extreme modification in order to define the national boundary between Slovenia and Austria
Photo: Julia Ellis Burnet



An oxbow of the regulated Mura River
Photo: Julia Ellis Burnet

3.3.3. Perceived environmental problems, landscape degradation and conflicts

Many respondents would not mention negative elements in the Őrség landscape while others highlighted *“strange coloured and formed buildings”* (Interviewee from Őriszentpéter)³³, which do not fit into the landscape; neglected landscape elements, abandoned estates, uncared for areas, the inattention of people. *“If I go to the field...I am glad because of its beauty...but not now, it is very unsightly”* (Interviewee from Nagyrákos)³⁴. *“Tares are growing on big parts of the fields in places of former wheat”* (Interviewee from Viszák)³⁵. They do not agree with clear felling, the former forest management strategy which caused damage in the forest. They are irritated by waste dumping in forests. They do not like fences surrounding homes (estates), because it changes the typical settlement view.

³¹ Original citation: „A Zala folyó élőhelyet biztosít, kedvező klímahatása miatt frissítő hatással van a tájra.”

³² Original citation: “ Veliko rek in potokov je bilo urejenih, bregovi rek pa se redno kosijo. ”

³³ Original citation: „Eszetlen színű és formájú épületek... agyvérzés.”

³⁴ Original citation: „Ha kimegyek a mezőre, szívem-lelkem szerint tudok örülni a szép mezőnek ...csak annak nem, amilyen most, mert nagyon csúnya.”

³⁵ Original citation: „A mezőnek nagy részén, a búza helyén kóró nő.”

They talked about the negative effect of the following landscape elements: neglected fields, quarries of open cut mines, railway lines and the viaduct by the Nagyrákos settlement, which does not blend into the landscape. They think that the fences around large extended agricultural areas are hindering the movement of animals.



Viaduct near Nagyrákos
Photo: Pál Balázs



Old mine near Hodos
Photo: Pál Balázs



Neglected orchard in Óriszentpéter
Photo: Pál Balázs

The Pomurje respondents considered land abandonment to be the most threatening obstacle to their landscape. Agricultural land is left to overgrow. Land abandonment goes hand in hand with an ageing farming population and with a lack of interest in farming amongst the young. It is also associated with high unemployment and low incomes. Therefore people, especially youth, move to larger centres. Older respondents are often disappointed because their children are not interested to remaining on the farm and cultivating the land. They think the main reason is that the work is too tiring for the young; therefore they would rather look for the job in the cities.



An abandoned traditional farmhouse in Goričko
Photo: Julia Ellis Burnet



Intensive farming patterns in Goričko
Photo: Gregor Torkar

*"Farming is today very confused. Now we only have three big farms with 130 cows in the village, but just a few decades ago every house in the village had two cows, because they also used them to cultivate the land. The first tractors came in 1970s ..."*³⁶ (Interviewee from Bogojina).

The respondents also disliked the pollution of rivers and streams, illegal garbage dumping and the generally low environmental awareness in the region. Respondents were not proud of intensive farming, requiring the use of crop pesticides and fertilizers. They also noticed negative changes in the local societies. They think that people are less prepared to cooperate with each other.

³⁶ Original citation: " Kmetijstvo je danes zelo zmedeno. Zdaj imamo samo tri velike kmetije s 130 kravami v vasi, ampak le pred nekaj desetletji je vsaka hiša v vasi imela dve kravi, ker so jih uporabljali tudi za obdelovanje zemlje. Prvi traktorji so prišli k nam v 1970-ih ... "

Most of the Őrség respondents do not know about significant environmental problems in the area. One third of them mentioned that the flora and fauna of the water courses are damaged because of the former intensive agriculture. They used too many chemicals and too much fertiliser on the fields. Ditches beside the roads are not cleaned, and thus water cannot flow away. They think that the ground water could be polluted during oil exploration. Some respondents had heard about the possible malfunction of the newly build sewage treatment system. A further environmental problem is the increasing traffic, which causes air, dust and noise pollution. The invasive species “Spanish nail” has become very numerous in vegetable gardens. Many people burn the garden waste, which is polluting the air. They think that the building of waste incinerator by Heiligenkreutz will have negative effects on environment.

Another significant environment related problem on the Hungarian side is the present conflict between the Őrség National Park and the local people. In opinion of the respondents, the Őrség National Park makes efforts to protect nature and preserve the landscape, but these efforts cause many restrictions, which are hindering farming and subsistence of local people. As a 60 year old local government employee said: *“Őrség should be protected but not from the inhabitants”*³⁷ (Interviewee from Bajánsenye). *“Our ancestors have preserved this landscape for a thousand years. The landscape should be preserved but not officially”*³⁸ (Interviewee from Nagyrákos).

The majority of Pomurje respondents reported low environmental awareness among local residents. As examples, they mentioned illegal dumping and burning of plastics. They also emphasized the pollution caused by farming. This includes a heavy use of pesticides as well as extensive monoculture cultivation. This occurred predominately in the lowlands with implications for the natural environment - degradation of landscape and groundwater pollution with nitrates and pesticides. Respondents were dissatisfied with some farmers, perceived as behaving irresponsibly and causing the death of bees, currently in the Pomurje region. They also see the negative consequences of groundwater pollution on the quality of drinking water. Locals can not use water from wells for drinking, because it is polluted with nitrates.

A respondent from Cankova noticed that the damming of the Ledava River in late 1970s had some negative environmental impacts. The river was dammed in order to prevent floods in Murska Sobota. The water in the artificial lake is now polluted and unsuitable for tourist development. Also, the lake influences the local climate by increasing fog in the area.

3.3.4. The perception of the “other side of the border”

The Hungarian border area was heavily controlled for several decades. Some people could cultivate their land in this area only with permission. The forest Along the borderline was cut in a zone 50 m wide. A zone a few meters wide was ploughed and constantly raked in order to be able to see footprints. The border zone inhibited the industrial development of Őrség, so traditional cultivating methods have remained.

After the liquidation of the controlled border zone, oak trees were planted in the formerly cleared area. Today people can go freely across the border towards Slovenia and Austria. They can see life on the other side, and can observe the habits of others. They have adopted some fastidious practices, for example, they now mow the grass in their gardens. But it may also have negative effects, for example, they now paint their buildings in unusual, bright colours as in Austria. After opening the border, traffic revived.

³⁷ Original citation: “Az Őrséget nem az őslakosoktól kell megvédeni.”

³⁸ Original citation: „A mi őseink ezer évig megőrizték ezt a tájat. Nem hivatalosan kellene tájat megőrizni.”



Monument on the trilateral border
Photo: É. Konkoly-Gyuró



Border line near Szalafő
Photo: Pál Balázs

Half of the Őrség respondents can no longer see the borderline in the landscape today. The remainder can see differences, which depict the border line. The difference between the Slovenian well-kept landscape and the Hungarian neglected one is visible in forests and in arable lands. In the former border zone, there are trees now, but the border stones still delineate the border line.

From the Slovenian perspective, the state border with Austria and Hungary during the Yugoslav communist period was highly secured. Most of the respondents remember this period that lasted until the 1990s. Respondents reported that some people illegally crossed the border with reindeer hooves tied under their shoes in order to fool the soldiers on the border. On the Austrian side the state border was also highly secured after World War II. Local farmers were not allowed to grow crops higher than one meter in the 100 meter border zone. One respondent explained that corn was not planted in this zone, because it is higher than one meter.



The trench and posts indicating the secured Slovenian / Hungarian border
Photo: Julia Ellis Burnet



A metal watch tower overlooking the border near Hodoš
Photo: Julia Ellis Burnet



The former Slovenian- Austrian border post in Pomurje
Photo: Julia Ellis Burnet

The State border also influenced the regulation of the Kučnica riverbed. The Kučnica is a small river along the border between Austria and Slovenia that was regulated during the 1980s. Land-consolidation programs followed on both sides of the state border. Respondents report that regulation of the Kučnica River helped to stabilize the state border.

The privately owned land was nationalized, especially on Hungarian side of the border and field patterns were changed. The state border lost importance for local residents after the fall of the Iron Curtain in 1989, and especially after 2004 when Slovenia and Hungary joined the European Union.

But for many of the respondents there is still a mental barrier in place. Today, the border zone is in many places overgrown with bushes and forests.

According to our Őrség respondents, *“in Slovenia every piece of land is cultivated”* (Interviewee from Magyarszombatfa),³⁹ although in comparison to Hungary, the area is hillier. The peasant farming traditions are still alive, orchards and vineyards also remain. Mechanical equipment on the farms is much better; you can see machines, e.g. tractors at every house. The traditional cultivating methods are still alive; they always leave a little ridge to let the water flow off the fields. Forests are in private ownership; their quality is like it was in Hungary long time ago. The settlement structure and houses are different. In Slovenia you cannot see “szer,” and alpine houses appear in the scenery. Their gardens are more beautiful and their estates are well-kept. Fields on lower relief levels are consolidated; bushes and trees were cut and large parcels created.

The landscape in Austria is also well kept compared to Hungary. Every foothold is cultivated, even the banks of the streams. The road system is much better; there are paved roads even to the vineyards.

There are also common elements that cross the two sides of the borderline, which connect the neighbouring areas. The hills, the valleys, the climate, the clayey soil, the natural conditions are the same. In some places the thinking of the people and their architecture are very similar too.

From the Slovenian perspective, the formation of the Iron Curtain between Hungary and former Yugoslavia in 1949 caused a geopolitical re-orientation as the state border became highly secured. Respondents explained that the border cut economic and social ties between nations and minorities. Until the end of the 1960s, when the first border crossings were open, they had no or minimal communication with relatives living on the other side of the border. Many people on the Slovenian and Hungarian side were forced to leave the area close to the border; they abandoned their land and went abroad. Respondents mentioned that arable land patterns on Hungarian side (on Slovenia's eastern border) are still larger in size and less complex than in Slovenia despite similar natural conditions on both sides of the border.

Locals in Prekmurje report having closer ties with people from Austria than with Hungarians. Richer Austria offered, and still offers, a significantly better income to people in Prekmurje. Respondents explained that Austria is an important destination for daily migrant workers and for shopping from the villages and towns that gravitate to the border. In the proximity of the Austrian border the infrastructure is better developed, houses are bigger and land is more cultivated. They also explained that the infrastructure is better in Austria and worse in Hungary in comparison to Slovenia. *“The west part of Goričko is more inhabited, there is less forest and a higher living standard, because people work in Austria”*⁴⁰ (Interviewee from Murska Sobota).

³⁹ Original citation: „Ott meg van művelve minden kis földterület.”

⁴⁰ Original citation: “Zahodni del Goričkega je bolj poseljen, je manj gozda in je višji življenjski standard, ker prebivalci delajo v Avstriji.”

4. Perception of the past, the landscape changes and the future scenarios

4.1. Project Region North – Elbe Sandstone Mountains

4.1.1 Perception of the past and the landscape changes

The perceptions of the interviewees delineated well the landscape development from 1945 up to now. The elderly respondents (60 and 75 years) told about the landscape of their childhood directly after the Second World War and in the 1950s. At that time fewer forests existed but consequently there were more richly used grasslands and arable lands. Hay was made; potatoes and beets were cultivated to ensure food for the poor population. Around the farmsteads there was no space which was not cultivated, according to a Saxon interview partner who described the emergency situation. People also utilised the railway embankments and roadside ditches for the cultivation of field crops.

A respondent from Saxony told about the vital life in the villages back then. Much of the daily work was carried out on and around the farmsteads. The important places were the dung pile, the farm pond and the fountain. Several roads led through the village. People met by the fountain or by the baking house where the bread was delivered. The village's creeks were a formative feature and offering a resource indispensable for life: water for drinking, cooking and washing.

The majority of the perceptions of landscape change are strongly related with the displacement of the German population from North Bohemia in 1945 and later. The respondents agreed on the fact that that this event had a decisive influence on landscape as it had completely interrupted the cultural and social development of the region. People who settled in the empty German houses had no emotional relation to their new environment. The cultural and social roots of those settlers were anchored in other regions of the Czech Republic, Slovakia, Ukraine and Romania. Most of them had been former prisoners or people who had never owned a house, a farm or just a piece of land and who had never learnt how to take care of their own property. The interview partners perceived that compared to the early times today's North Bohemian landscape has become overgrown and the decrease in population had become visible through the decay of settlements. Where a village had once consisted of 59 houses, it was reduced now to eight in the worst condition. But an interviewed person found out that on that day the remains of that wildness of landscape which had begun 1945 could still be seen, although 50 years before it had looked much worse than on that day.

4.1.2. Changes in agriculture and forestry

While in former times hundreds of people had worked in agriculture and plots were divided into small sections that characterised the landscape, today arable lands lie fallow or have been converted into grasslands. During socialism agriculture in the German Democratic Republic (GDR) and in Czechoslovakia were collectivised and managed by agricultural production cooperatives. Six interviewed persons remembered the wide cultivation plots in contrast to the diverse landscape structured by field boundary ridges in the 1930s. The intensive cultivation of those cooperatives along with the use of fertilisers led to higher crop yields. The consequence of those measures was the acidification of soils and the loss of biodiversity. The colourful flower meadows become rare since species like poppies, cornflowers, cuckoo flowers and hawkweeds did not grow any more.

The size of the agricultural plots decreased after the fall of the Iron Curtain in 1989. Former cultivated plots were transformed into extensively used grasslands. An interviewee stated that in the

beginning of the 1990s, after the interruption of artificial fertilisers, plants appeared which had vanished 30 years ago. An interviewed farmer explained that guidelines of the European Union did not allow farmers to leave any piece of land unused today. That means they had to plough their fields until the edge of the next field or the adjacent path. The consequences were that field margins, as very important structuring landscape elements, disappeared and birds, grey partridges, hares or butterflies lost their habitat.

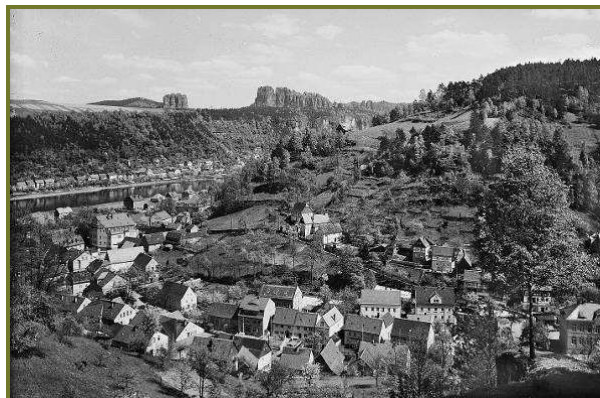
Interview partners from both sides of the border were saddened about the increasing succession because the attractiveness of the landscape would become lost. For example, the meadows along the Kirnitzsch/Křinice River were decisive landscape elements enhancing the attractiveness of the whole valley. The succession of the meadows near the state border was progressing and displaced significant species, for instance, the spring snowflake, which could only be maintained by regular mowing. In a trans-boundary context, authorities tried to motivate farmers and landscape conservationists to keep open meadows and cultivate them in an extensive way, a Saxon respondent stated. In North Bohemia some respondents noticed that in many places the former arable land was replaced by meadows poor in species and that these plots still were mowed infrequently. The former diversified open landscape was completely absent in some landscape sections. Only meadows existed as far as the eye could see. Unused land took over a considerable part of the landscape scenery. Without extensive use of the landscape, its biological diversity would become lost and natural processes took roots, an interview partner said. The following three photo triptych shows examples of succession processes in the Elbe Sandstone Mountains.



Slope near Halbestadt at the foot of Lilienstein beginning of the 20th century (left) and today

Source: wikipedia commons/Kunstanstalt Hermann Poy, Dresden

Photo: pixelio/Marica Herre



The village Krippen towards the Elbe valley: left in 1935 and right today
Photo: SLUB/Deutsche Fotothek, Walter Hahn Photo: google panoramio/kirstf



View on the village Ostrov mid of the 20th century (left) and today
Source: CHKO Lábské pískovce/Walter Hahn - CHKO Lábské pískovce/Karl Stein

Most of the respondents stated that forests increased enormously over the last 40 years. Arable lands and grasslands were successively overgrown with bushes and would develop into woodland soon. Sulphur pollution had been greatly reduced in the last 20 years. Especially the sulphur dioxide emissions of the North Bohemian and Lusatian coal-fired power stations which had tremendously damaged the forests of the Elbe Sandstone and Ore Mountains, mainly spruce populations. An interviewee said that years before, a sick or dead spruce with bald boughs was normal, while today people noticed the fresh green of the needles. The respondents were sure that the forests had regenerated from their former debilitation.

During GDR times clear cutting had been practiced in the forests of Saxon Switzerland, an interview partner pointed out, so hikers had enjoyed wide outlooks. In the 1980s the forest decline had commenced. Particularly conifers had been extremely damaged by the emissions of the coal-burning power plants. An interviewed person in North Bohemia looked back on the airplanes which had spread birch seeds over the woodland areas so that something new could be grown. After the fall of the Iron Curtain reforestation began. Predominantly spruce monocultures were planted.

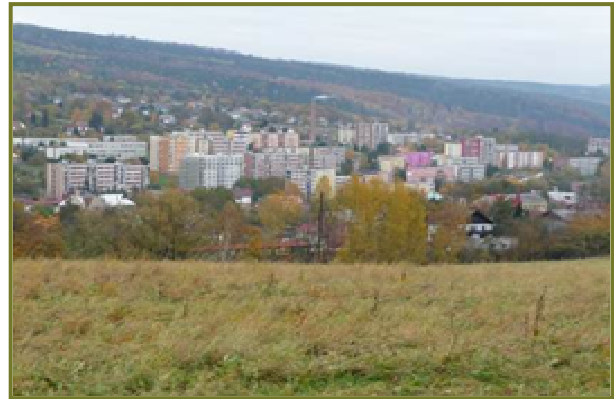
Currently, an active forest conversion aiming for the rearrangement of tree species was observed by some respondents in Saxon Switzerland. The dominating spruce forest was being replaced by mixed forests step by step. Beech was planted frequently and foresters strove to resettle fir, which had been a dominant tree species in the beginning of the 19th century.

4.1.3. Changes in settlements, infrastructure and tourism

After the displacement of the German population from Bohemia after the Second World War, many settlements thinned out or became completely deserted places. The houses decayed because nobody lived there anymore or people who had moved to those places had not taken care of them. In the bigger settlements in the North Bohemian border region, the population decline in relation to the beginning of the 20th century was still noticeable today. In North Bohemia a respondent said that the city of Krásná Lípa had 8,500 inhabitants around the year 1910, while today only 3,600 people lived there.

In the Saxon border area, an enormous loss was recognized regarding the settlement structure. A Saxon interview partner complained that huge rectangular complexes had been built for industrial and agricultural purposes over the last 70 years. They had strongly influenced the scenery in a negative way. Vernacular architectures were rarely adopted and were adapted to contemporary styles. Only functional new buildings without any character could be found everywhere, the respondent observed. In the first half of the 20th century, the settlement structure was more loosely

structured with insular farmyards, while the settlement density today was much higher. On former children's playgrounds, there now stood buildings of the GDR times or modern detached houses, remarked an interviewee. After the end of the GDR, old socialist buildings without a viable function were demolished which had influenced the scenery in a positive way, remarked a Saxon interview partner.



Socialist buildings in the landscape of Saxony (left) and North Bohemia
Photo: google panoramio/Kampfmops1976 - Photo: google panoramio/macho

From two Saxon interviewees' points of view, the traditional Umgebinde houses would be threatened by vacancy in the next decades, because many owners were already very old and the children or grandchildren might not accept the houses. Compared to the perceived situation in Saxony, a change had begun in North Bohemia. It was recognized by three interview partners that the local Umgebinde houses were renovated in an original way and that they looked more colourful and fresher than ten years before. Often people who lived in Prague and came to the area for the weekend had bought the houses and renovated them. The fences were again drawn properly and also the gardens were beautifully arranged with colourful flowers. In that way, the Bohemian witnesses were convinced that the historical building stock would be kept from decay.



Village scenery in Chřibská (left) and Hinterhermsdorf
Photo: Anke Hahn - Photo: wikipedia commons/Mirek256

Because people have more leisure and are more mobile today, the regional traffic has increased eight or tenfold, a Saxon respondent estimated. Today everyone accessed the starting point for his hiking tour by car, while once the S-Bahn had been the main transport means. In North Bohemia the successive improvement of hiking trail infrastructure was perceived.

Through the natural separation of the Elbe Sandstone Mountains through the Elbe there was a need for local traffic bridges crossing the river. The bridge in Bad Schandau/DE made a connection for

trains and cars over the river. A Saxon interviewee said that the Elbe ferries were also important for tourism between the railway left and the hiking area situated in the national park to the right of the river. An interviewed person from North Bohemia praised the development of public transport. Today you are able to travel across the border or in your own area by bus, train and ferry without any problems. But it was also confirmed that you needed to have a car if you lived in one of the picturesque but remote villages in Bohemian Switzerland and were dependent on institutions in the cities like a school, doctor or your own working place. For example, the bus connections to Děčín/CZ were not always ideal.

Today the trans-boundary railway connection along the Elbe is an important traffic corridor for the region and also for international freight and passenger traffic. The Saxon Semmering railway with lots of tunnels and viaducts connected the cities of Sebnitz/DE or Neustadt/DE with the district town of Pirna/DE. Efforts were made to re-establish the trans-boundary railway connection between Sebnitz/DE and Dolní Poustevna/CZ, mentioned a Saxon interview partner.

A Bohemian respondent stated that although a dense regional railway network existed, some lines had been closed in North Bohemia. She regretted that the railway line between Děčín/CZ and Teplice/CZ had been closed a few years before because she adored its scenic line along the foot of the Central Bohemian Uplands where she and her family had gone to Telnice/CZ for skiing when she had been a child. Nowadays the line was used sporadically, mostly in summer holidays.

At that time people in the Elbe Sandstone Mountains were concerned about the construction of the A17/D8 motorway from Dresden to Prague over the ridge of the Ore Mountains and the Central Bohemian Uplands. The statements of the interview partners made clear that some of them see the motorway as an important indicator for regional economic development, while others feared its negative impact on biodiversity. An interviewed person from North Bohemia supported the construction of the motorway as the caravans of trucks crossing the villages of the Ore Mountains, Elbe Sandstone Mountains and the Central Bohemian Uplands created a huge problem for people and nature. It was necessary to channel the heavy traffic out of the villages and funnel it onto the motorway.

A contemporary witness described today's industrial landscape of the Elbe Sandstone Mountains as characterised by abandoned industrial buildings. Today medium-sized private enterprises replace the former centralised socialist industrial complexes. An interview partner perceived the disfigurement of the landscape through industrial buildings. Once, before industrialisation, the Lachsbachtal (English "Salmon River valley") had been an idyllic valley between Bad Schandau/DE and Hohnstein/DE, but nowadays it was completely swamped by industry and trade.

A Bohemian interviewee remembered the time when the Šluknov Hook, the northernmost region of the Czech Republic, had been one of the most industrialised areas in times of the Austrian-Hungarian monarchy. In the 1930s the landscape in that part of North Bohemia had been more affected by industry than today. The consequences of the Second World War led to the decline of North Bohemian industries. Perceptions of the industrial development during socialism were not mentioned by the interviewees. They emphasized more the decline of the socialist economic system and the following crash of enterprises and growth of unemployment. In particular, the glass and textile industries had decreased enormously in North Bohemia. Many abandoned industrial areas with ruins of former factory buildings remained in the landscape.



Here flourishing and there ruined – paper mill in Königstein/DE (left) und industrial ruin in Mikulášovice/CZ
Photo: google panoramio/Fahrrad80 - Photo: Anke Hahn

In the beginning of the 19th century the Elbe Sandstone Mountains had already been a popular tourist destination, especially for inhabitants of the surrounding cities of Dresden/DE and Děčín/CZ. Standing on the sandstone rocks nature was perceived as liberty and disengagement from daily routines. The first tourist accommodations emerged on top of the mountains with wide outlooks.⁴¹

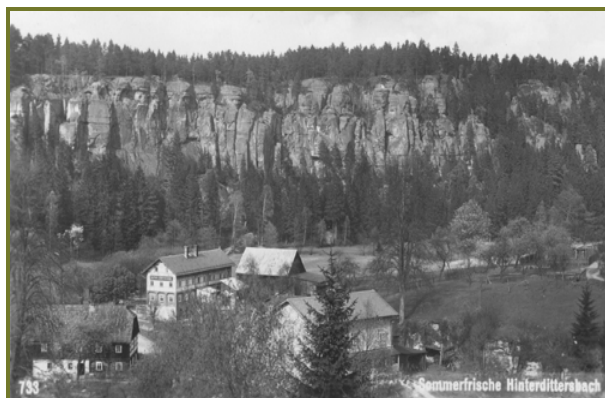


The guest house on top of Großer Winterberg in Saxon Switzerland around 1875 (left) and 1920
Source: Wikipedia commons/Bernhard Mannfeld - Photo: Wikipedia commons/Kunstanstalt Hermann Poy, Dresden

Between the First and the Second World Wars, places like Zádňí Jetřichovice/CZ and Zádňí Doubice/CZ had been popular tourist destinations in Bohemian Switzerland, stated a Bohemian respondent. But in those times people had walked less and more had spent their time and money in the local pubs. After 1945 the tourist infrastructure broke down in the North Bohemian border area. Today in Zádňí Doubice just two houses remain, while Zádňí Jetřichovice has become completely abandoned land.

An interviewed person from Saxony addressed the tourist function of the holiday homes which were established by the Trade Union Federation of the GDR in Saxon Switzerland during times of socialism. The workers and their families used to spend their holidays in the Elbe Sandstone Mountains. People, who had settled in the Bohemian borderlands after the war, had not begun to perceive their surrounding landscape till the 1970s and 1980s. Then they had discovered hiking and other recreational activities, while in Saxony hiking had always been popular, the interview partner stated.

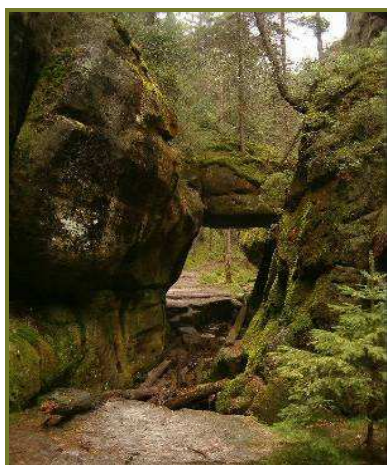
⁴¹ MARTIN 2001, 179.



The settlement of Žádň Jetrchovice in the year 1938 (left) and 2011
Source: Hans-Joachim Gnauck - Photo: Anke Hahn

The statements of the interview partners revealed that today tourism was an important economic factor of the trans-boundary region. Visitors were mostly concentrated in the “rocky areas” on the right of the Elbe. On the left side of the river in the area of the table mountains, tourism was kept within a limit. On Bohemian side, the inrush of tourists was concentrated in areas around Děčínský Sněžník, Tyssa Walls and the rocky area around Jetrchovice. Most individual tourists came for hiking and rock climbing, while groups were dependent on buses, said a Saxon respondent.

Four interview partners complained about the fact that historical and current hiking trails were successively closed for nature conservation reasons. That applied to the trail along the stříbrné stěny (English “silver walls”) near Hřensko/CZ in the direction of pravčická brána, to the old trail along the state border or to the path at černá brána (English “black gate”). A few respondents wished that those trails should be made accessible again to enhance the perceptibility of the cross-border landscape Elbe Sandstone Mountains. The respondents agreed that because of growing succession and inaccessibility, the landscape was losing its touristic attractiveness.



Today the former trans-boundary hiking trail ends directly at the border, at černá brána (eng. black gate)
Photo: Hans-Joachim Gnauck - Photo: Anke

4.1.4. The vision of the future and the ideal landscape

Most of the interviewees wished that the Elbe Sandstone Mountains would remain a landscape worthy of protection. The harmonisation of nature conservation and tourism needed to be strengthened in the future.

- A landscape more attractive for hikers

Respondents on both sides of the border would like to experience landscape individually by sustainable tourism, e.g. hiking, and by the re-establishment of historical hiking destinations, e.g. the Kirnitzschschänke, the famous guesthouse for day tourists who had come to Zádňi Jetřichovice/CZ years ago. Historical hiking paths, like the border trail from Großer Winterberg to Pravčická Brána or the old path from the German side to Černá Brána, should be reactivated to attract the Elbe Sandstone Mountains as a trans-boundary hiking destination by accepting the rules of a protected area.

- A landscape with less coniferous monocultures and more species-rich mixed forest

Some interview partners thought that the forested area further increased and the share of broad-leaved forest. At some time, one interviewee promised, there would be more beeches than firs in the forests of the Elbe Sandstone Mountains. The landscape would become ever more overgrown, e.g. the meadows in the valley of the Kirnitzsch/Křinice.

- A landscape with more foreign species due to climate change

A contemporary witness foresaw that climate change would bring more invasive species to the region, animals and plants, which had never been familiar in that area. Species like Himalayan balsam (*Impatiens glandulifera*) or coneflower (*Echinacea*) would further settle the region in the next years and would have a decisive impact on the landscape scenery.

- A landscape in between nature conservation and land use purposes

The current conservation plan for the Saxon Switzerland national park was criticized, because tendencies to let landscape become primeval forest where nobody would have access any more would have negative impacts on tourism and people's perception of the landscape and the national park. The designation of wilderness reserves attracted wolves and lynxes, a Saxon interview partner argued. The wolf was a threat to farm animals, like sheep and goats, which were kept in open stables. Farmers needed to get new fences and insurance. But on the other side it would also be a benefit for conservation purposes to have more areas under protection for natural processes within the trans-boundary national park.

- A landscape as it was once

A Bohemian respondent was sure that when fuel would be gone someday, it would have a great impact on the cultural landscape. People would acquire a completely new relation to the landscape. Then, man would begin to cultivate the landscape in a more traditional way and the landscape diversity we know from former times would return again because the individual picture and vibrancy of a landscape were decisively influenced by humans who live and utilize the landscape.

4.2. Sopron basin, Fertő/Neusiedlersee, Hanság - Project region Central-South

4.2.1. Perception of the past and the landscape changes

The time scale of the past goes back about a half century; this is the landscape of the interviewee's childhood. Both in Austria and Hungary, many interviewees have a memory of a wilder, more unmanaged landscape, with less paved roads that served as a perfect playground. It was safer and more silent without the heavy traffic. The citizens of Sopron talked about the large green areas within the built up areas, the forest-gardens with nice chestnut trees in the Sopron Mountains, which was the recreational district for the city, where most of the families spent the summer. In the Hanság people remember the large wetlands, the life with water, where the fishing and boat traffic was usual and roads were rare. That is why the Hanság was generally considered as impassable area. The settlements were located only on the small elevated dunes, called "gorond" and the grassland was the most usual land cover with scattered forest patches or tree rows. Similarly to the Austrians, Hungarians refer to the big herds grazing everywhere. Life was much more modest, all people of the villages worked on the land with horse-drawn machines and with their hands. Less technology but a much better communal life bound people together.



Alder forests in Hanság
Photo: Ágnes Tirászi



Forest plantations in Hanság
Photo: Ágnes Tirászi

The changes of the landscape have been called "slinking" processes. An Austrian interviewee used this expression for the changes in agriculture and a Hungarian for urbanisation. These are slow transformations, hard to perceive especially when people have less personal attachment to the land and to nature. Most of the Austrians said that the landscape in the 1950s had been much more diverse and colourful.

In addition, interviewees from Sopron regret the disappearance of the chestnut-groves, the increasing cutting of forest cuts, the loss of waters, the drying out of springs and lakes, and the covered streams. Along Lake Fertő interviewees perceive the abandonment, the re-naturalisation of formerly cultivated areas, the decrease of the water level of the lake and the degradation of the reed belts.

The scale of changes is much higher in the Hanság due to the water regulation and land reclamation. People are aware of the consequences: the loss of the former wetlands and the decrease in the groundwater table. It is important to note that opinions about the changes and their extent vary greatly. Some consider them as a normal process, others think it is absolutely fatal.

4.2.2. Changes in the agriculture and forestry

The speeding up of all activities related to agriculture has been mentioned several times.

„I am not that old yet, but even I notice the acceleration – everywhere! ...in all activities concerning agriculture... but these are the present times...” (interviewee, Ödenburger Mountains)⁴²



Vineyards in Rust,
Photo: Ágnes Tirászi



Abandoned vineyards in Fertőrákos,
Photo: Ágnes Tirászi

The overall intensification of agriculture is entirely perceived. In Austria the small farms have been replaced by a few big enterprises and the people living in the villages no longer work in agricultural production. Thus their attachment to the landscape is weaker. Today everything is carefully managed, and no flowers or weeds occur along the roads. In reality in the last decade an inverse process, the environmental friendly land management and the fallow land has also been present and some of the interviewees are aware of that. The traditional stake culture in vine growing changed and today high cordons can be found everywhere. This intensification has recently been significantly mitigated by the more frequent grass cover over the soil. The expansion of the vineyards in Seewinkel is also a dominant process. It is the opposite in Hungary where a significant abandonment of the vineyards has taken place. This is a sensitive point in Sopron since wine culture has long traditions there. The wine producers of Sopron are called “Ponzichter.” The name originates from the German word “Bohnenzüchter,” a man who grows beans. This was a special cultivation form when beans were grown between the rows in the vineyards.

Both on the Eastern side of the Lake Fertő and in the Hanság people see the loss of the extensive wet meadows and pastures, the orchards, the tree rows and the decrease of livestock. The lack of grazing results in the spreading of reeds and the increase of arable land. In Hungary the large arable fields formerly owned by the cooperatives are today private properties and the parcel sizes have decreased but the character did not change a lot.

The loss of former vegetable gardens around the rural houses is equally similar in both countries. Not only in villages, but also around Sopron, the small utility gardens and orchards have almost disappeared giving place to residential areas and ornamental gardens. In the Hanság the harvest of bulrushes and the matting was general and recently almost disappeared. It is the same with the reed harvesting. It has unfortunately decreased, along with the related use of reeds in architecture.

⁴² Original citation: "Ich bin noch nicht so alt, aber ich merk auch die Beschleunigung - überall! ... Bei allen Tätigkeiten, die mit der Landwirtschaft zu tun haben ... aber des is die Zeit."



Reed harvest, Mörbish
Photo: Ágnes Tirászi



Harvest of bulrushes
Source: collection in Bősárkány



Hungarian Grey cattle
Source: collection in Lébény



Hay cutting
Source: collection in Lébény

Fish has been an important early source of protein in our diet and thus fishing was the most important activity both in the lake Fertő and in the Hanság. Its significance was lost to some extent in Austria and became declined to almost nothing today in Hungary, although sport fishing has spread.

Forest cover has always been characteristic in the western part of the study area in the Leitha and Sopron Mountains. Interviewees have the impression that the forest cover has remained about the same except that the town Sopron has expanded to some extent infiltrating increasingly into the forest. People perceive more changes in the species composition of the woods and their management. Spruce and acacia plantations replaced the former natural oak forests. Citizens of Sopron have contradictory opinions on forest management. Some complain about the increasing forest clearings without reforestation, others believe that environmental friendly forest management is spreading.

On the plains in Austria the plantation of the forest belts as a protection against wind and the spreading of Acacia were mentioned. In Hungary on the contrary the cutting of tree rows, the disappearance of many wooded corridors is perceived by people. In the Hanság where forest was traditionally lacking, the few alder and oak forests are considered as highly valuable spots. People are aware on the large scale plantation of the poplar clones in the 1960s-1970s. The national park is endeavouring to replace them with natural stands and to restore the wetlands whose future is in doubt.

4.2.3. Changes in the settlements, infrastructure and tourism

Both in Austria and Hungary interviewees consider the expansion of residential areas, the spreading of urbanisation, the loss of traditional village character by the new building styles, and the increasing traffic mainly as a degradation.



Fertőszéplak once (Source: Üdvözlét Fertő-Széplakról Nagy utca Kiadó Fogy. Szövetkezet Fertő Széplak, Arcanum, 2008).



Fertőszéplak now
Photo: Veronika Terpó

Austrians especially complain against the "Ausfransen des Ortsrändern" the scattering of the boundaries of the traditionally compact settlements, resulting in the dispersion of the built up area and dying out the very old centres. Therefore, the radius of the area providing the basic services to the inhabitants has become much larger, and more people need to use cars so traffic is growing. They also perceive the transformation of the style of construction altering the entire settlement's character and the loss of thatched roofs. Some new buildings are considered disturbing and called "*Bausünden*" "building crime."



Rust lakeshore once (Source: Üdvözlét Rusztról. - Látkép. Groß aus Ruszt. - Totalansicht. Tremmel Vilmos kiadása, Ruszt, Arcanum 2008)



Rust lakeshore today
Photo: Veronika Terpó

In Hungary people are proud on the ancient core of the town Sopron that has remained intact, but they also dislike the peri-urban area with the dormitories of the 1970s (Jereván) and the new "residential parks." They regret that the nice old wooden villas in the Sopron Mountains are being replaced by new, often showy houses. They find that the panoramic view is disturbed in many places and the green areas are gradually shrinking in the city. Interviewees said that the overall picture of the settlement around Lake Fertő has not changed considerably since only few buildings disturb the scenery. That coincides with the opinion of the Austrians about the Hungarian villages on the lake shore. The new constructions

are expected to be held under control recently by the authorities taking more rigorous care of the world heritage cultural landscape.



Traditional houses in Fertőszéplak, today village museum
Photo: Éva Konkoly-Gyuró



Uniform houses
Photo: Ágnes Tirászi

Although the rural character has been more preserved in the Hanság than at the lake shore, the perceived changes seem to be greater there. It is because the Hanság was significantly sparsely inhabited in the past. The few small hamlets and settlements could be built only on the elevated relief levels that had been surrounded by marshland. In the past loam and clay were the unique building material. Some of the small ponds still existing today are the areas where building material was dug out. An interviewee in Osli said that the village was built up from the lake at the entrance of the settlement. Formerly a typical building type was the “gunyó” a provisional shelter for fishermen and shepherds that we cannot find any more. Many regret the loss or transformation of the typical farmsteads of the Esterházy estate, called “major” and the traditional village character disturbed by the uniform “socialist” houses and the new buildings not respecting the traditional style. Unfortunately only few nice old houses are preserved in the settlements of the Hanság.



Abandoned agricultural building in Földvámajor
Photo: Ágnes Tirászi



Husbandry in Hanság, Miklósmajor
Photo: Ágnes Tirászi

Recreation and tourism has developed at different rates in the western and the eastern part of the Austrian study area and also according to the opinions of the interviewees. While in Austria a boom in tourism and the construction of tourist infrastructure took place at the end of the 1970s, it seems to have slowed down recently. In Hungary the big change has happened after the political change of 1990, when the Iron Curtain was taken down and the border was opened. People in both counties see that specialisation in tourism has continued. Cultural tourism of Eisenstadt, Sopron and Fertőd is well known. People are aware that in Seewinkel and around the lake cycling has become most popular, and this was the beginning of the development of slow tourism in Austria. However, as environment

friendly slow tourism is gaining in significance, the creation of golf courses shows the opposite tendency. Bathing in the open water, sailing, yachting and holding many festivals and events is characteristic in Austria (Illmitz, Podersdorf, Neusiedler am See, Rust, Mörbisch). Spas are more significant in Hungary (Balf, Hegykő) and Hungarians complain that the open water surface in the lake almost entirely lacking in Hungary except near Fertőrákos. In Austria, some Interviewees think that the offer of recreational activities does not meet the requirements of today and therefore the attendance is decreasing in the Fertő landscape.



Bath and bicycle tourism on the Austrian side of the Lake
Fertő, Photo: Eva Konkoly-Gyuró



Cyclists near Illmitz
Photo: Ágnes Tirászi

In Hungary the citizens of Sopron referred to active outdoor activities before 1990. The recreation consisted of frequent hiking and staying in the Sopron Mountains in small forest-gardens and recreational residences of the socialist enterprises. They were a kind of hotels that could be visited only by the employees of the companies for a very low price. Austrian shopping tourism to Sopron has been frequent and today the attendance of cultural events is increasing. The one-day tourism is unfortunately more usual, and it causes an additional traffic load, noise, and pollution.

After 1990 a rapid development in tourism and its facilities occurred around Lake Fertő. For the inhabitants of Sopron "being on Fertő" became a new life style...although in Hungary there is only one place at the lake shore, where the open water is accessible at Fertőrákos. Cycling and ecotourism are developing in Hungary as well. Outdoor activities and related nature-experience is increasingly attractive today. In the Hanság people think that the area is not highly attractive for tourism except some particular spots (the Esterházy Birdhouse, the town of Kapuvár, and the church of Lébény.) Thus mainly transit tourism is usual. Neither facilities nor attractions are sufficient for a longer stay.



Lakeshore at Illmitz
Photo: Ágnes Tirászi



Lakeshore in Hungary
Photo: Ágnes Tirászi

The answers to our question about infrastructure development reported on the traffic, transport and their facilities. The increasing number of automobiles and the new road constructions are perceived by the interviewees, not surprisingly mainly by the inhabitants of the towns and the villages near the motorway and main roads. Due to bad public transport facilities, the ratio of cars per person is the highest in Burgenland. Motorisation is lower in Hungary but the distance to the railway from the villages of Fertő and the Hanság, does not allow regular daily use of the railway. Thus automobiles and coaches are the common means of transport. In the Hanság the situation has changed enormously. Before the draining of the marshland, people used boats as their main vehicles. At the end of the 19th century, a narrow guage railway was built. This had an important role in transportation of agricultural products, peat and later wood, and also passenger traffic. People very much regret its liquidation, as with the tramway of Sopron. However the new cycling roads are considered very positive though they are still insufficient in Hungary.



Highway and motorway
Photo: Thomas Wrbka



Windmills
Photo: Thomas Wrbka

The Hanság became over woven by new gravel roads during the socialist time, mainly to access the new forest plantations. The most recent development is the construction of the Hegyeshalom-Vienna motorway. The opinion about it is similar in both countries. Although it is necessary it has a huge impact on the landscape by fragmentation and disturbance of the natural habitats.

4.2.4. The vision of the future and the ideal landscape in the Sopron-Fertő-Hanság region

Austrian respondents described how they imagine the future of the area and they also expressed their wishes. The most frequently raised question has been water management and nature conservation when talking about the future scenarios. Only one person directly mentioned climate change, the possible extreme weather situations, and desertification and flooding, however most people think that water management is a crucial issue for the future. They find it necessary to hinder the sinking of the water level of the lake and the groundwater table. The drying out of the small lakes of the Seewinkel has to be hindered. Some clearly wish to stop the building of polytunnels (grenouses made of polyethylene sheets) and the “hysteria of glasshouses,” (“*Glashaus Hysterie*”) that need tremendous quantities of water and mutilate the landscape scenery (“*Landschaftsbild verschandeln*”). In Hungary the issues of water management were not been raised in the western part of the study area of Sopron. The respondents from the Fertő area expressed their wish to have an open water surface on the Hungarian side of the lake. In the Hanság interviewees talked about the further restoration of the former wetlands, as projected to the future from the recent activities and strategies of the National Park, which is partly acknowledged and partly questioned.

According to the vision of interviewees in both countries, recent processes are continuing in urbanisation and agriculture. A further spreading of the built up areas, the expansion of the industrial

and commercial areas around settlements, placing of ever more wind turbines and increase of the traffic load is most probable. Agricultural activities will lose significance. Thus there will be more fallow land in the future and illegal waste deposits will increase.

„It becomes increasingly difficult to cultivate certain parts of the landscape - this is becoming a major problem.“⁴³

Tourism and recreation will prevail or should be more dominant in the region according to the respondents of both counties. This will help to maintain the landscape but brings threats as well e.g. the construction of golf courses. Therefore environment friendly slow tourism should have a leading position. In the view of Austrians, the region can benefit from nature conservation and from the National Park. Today people and decision makers are insufficiently aware of the potential of the attractive natural areas for the future.

Both Austrians and Hungarian interviewees have strong emotional attachment to their landscape and the picture of the ideal landscape is not far from what they have described as characteristics of today. Some interviewees explicitly wish for an unchanged landscape.

„If it would remain as it is now, here where we are – here I feel good, here I’m home - if it would stay that way, that would be enough.“⁴⁴

People find ideal the diverse, quiet, cultivated, well-kept landscape, reflecting harmony between people and their environment, where all living creature can find their place. The diversity of relief and the waters (springs, streams and lakes) play an important role in their ideal. In the Sopron-Fertő area and in the western lake shore in Austria the vision of the ideal landscape coincides well with the present state. It is important to know that inhabitants of this region are proud of their status as a world heritage cultural landscape.

There are also respondents in Austria who would like to have a landscape that is more natural, less controlled that maintains the small structures of today, where the diverse land use forms will be further developed in the future. The “Earth Market” and “Slow Food Burgenland” have been mentioned as positive initiatives. Many respondents wish to stop new road construction. All these statements are signs of a high level of environmental awareness.



Wetland rehabilitation in Hanság
Photo: Ágnes Tirászi

⁴³ Original citation: "Es wird immer schwieriger, gewisse Teile der Landschaft zu pflegen - das wird zu einem Hauptproblem"

⁴⁴ Original citation: "Wenn es so bleiben würde, wie es jetzt ist, da bei uns - da fühl ich mich wohl, da bin ich daheim - wenn's so bleiben würde, würde des reichen"

The situation is slightly different in Seewinkel and the Hanság. We might remember that in the Hanság where the changes have been much greater, several respondents described the past when we asked about characteristics and they mean that the ideal Hanság was its state before the water regulation. So an ideal landscape coincides with the characteristics they talked about, just it does not refer to the present, but to the past. There are also interviewees who have a realistic picture and perceive precisely the great transformation and the need to restore wetlands in order to achieve a more natural ideal landscape with abundant water.

4.3. Órség/ Goričko –Project region South

4.3.1. Perception of the past and the landscape changes

Small scale farming with animal husbandry was typical in the Órség area until the 1950s. Every peasant family had 4-5 cows, pigs, some a draft horse, hens and some geese. On the arable lands they left ridges to let the water flow down from the fields. There were no tractors; they cultivated their lands with horses or cows. They used every little piece of land. *“There were none such a little area, which would not be cultivated”* (Interviewee from Magyarszombatfa)⁴⁵. They produced buckwheat beside wheat. People joined together during agricultural activity, helping each other. They harvested with their own hands. Every house had a little vineyard on a higher part of the hill. They grew grape vines which had no need for chemicals.

*“The landscape was beautiful and clear”*⁴⁶ (Interviewee from Óriszentpéter)



Former landscape in Óriszentpéter (HU), Ethnographic Exhibition in Óriszentpéter



Nagyrákos today (HU)
Photo: Pál Balázs



⁴⁵ Original citation: „Nem volt olyan kicsi terület, ami ne lett volna megművelve.”

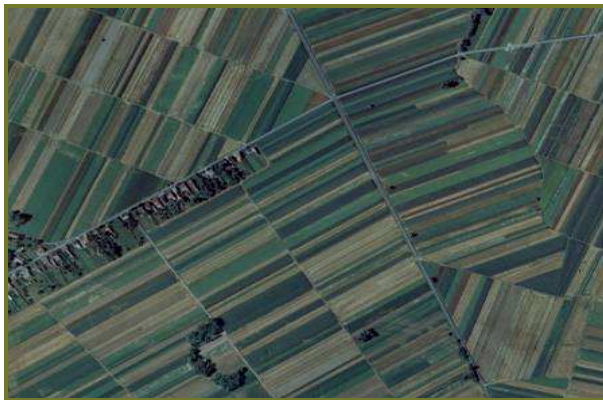
⁴⁶ Original citation: „Gyönyörű tiszta volt a táj”

Hayricks in Órség
Photo: L. Tukács (1964)

Abandoned, bushy area near Bajánsenye (HU)
Photo: Pál Balázs

In Slovenia the past landscape was very similar to the Hungarian one. Respondents highlighted its mosaic structure. The major source of income was the land, which was inherited proportionally by all family members. In other parts of Slovenia, in contrast, usually only one son inherited the property. The side effect is that the land in Prekmurje became sliced into smaller and smaller units. In some cases the property is merely 300 meters long and less than 5 meters wide.

*"In the past people depended only on crop fields, because there were no jobs and no industry. They had big families and the land was very important to them as their major source of income. In order to survive, they divided the land among all family members."*⁴⁷ (Interviewee from Črenšovci).



Landscape mosaic near Melinci (Prekmurje)
(DOF GURS 2006)



Landscape mosaic near Veržej (Styria)
(DOF GURS 2006)

4.3.2 Changes in agriculture and forestry

During the collectivisation of agriculture in the 1950s, the newly established farmers' cooperatives took everything away from the farmers. Parcels were ploughed together in order to make bigger parcels which were easier to cultivate. They used much more chemicals. Many orchards were cut down in order to get more arable land. Grape vines appeared at the ends of the gardens or beside houses at this time. They produced black currents and raspberries, which made Órség famous. There was a dairy in almost every village. The farmers' cooperatives allowed people their own household allotments so they could make more money besides working for the cooperative.

"Some farmer's agriculture cooperatives were working well with good leaders. They provided work for local people, and gave good payment in return."(Interviewee from Óriszentpéter)⁴⁸.

After the communist regime collapsed the land became private again, but only a few people recommenced farming. Much arable land in Órség is now cultivated by foreigners but not in accordance with traditional practices. The rainwater cannot flow away from the fields, because there are no ridges. There are Christmas tree plantations on many former arable fields. Meadows are rarely mown and thus they become bushy. There are extensive abandoned lands despite of the National Park's efforts. Some people are still farming, but they cannot sell their products, as there is no market for the products from Órség. The animal husbandry has almost disappeared.

⁴⁷ Original citation: " V preteklosti so ljudje bili odvisni samo od pridelkov, saj ni bilo delovnih mest v industriji. Imeli so velike družine in zemljišča so jim bila zelo pomembna, saj so predstavljala večji vir dohodka. Da bi preživel, so razdelili zemljišče na vse družinske člane."

⁴⁸ Original citation: „A TSZ-ek egy része jó vezetővel működő képes volt, munkát adott a helyieknek, jó fizetésért cserébe."

*"The hillside full of vineyards are disappearing, today it could be named only hillside."*⁴⁹ (Interviewee from Bajánsenye).

*"The biggest problem had happened, when people made garages from stables."*⁵⁰ (Interviewee from Nagyrákos).



Farming in Bodonci around the 1930s, Goričko
Photo: Personal archive of S. Sever



Abandoned meadow near Vasszentmihály (HU)
Photo: Pál Balázs



Intensively cultivated arable land in Őrség (HU)
Photo: Pál Balázs

The Pomurje region was also subject to agricultural modernization that had important implications for the natural environment and for social capital and the rural lifestyle. In agriculture, the image starts to change with the emergence of mechanization. In the first half of the 20th century, animals were still used for ploughing. In the 1960s the first tractors and other agricultural machinery was introduced which induced changes in ploughing techniques. In the 1980s farmers commenced intensive agricultural practices. This included a heavy use of pesticides and herbicides as well as extensive monoculture cultivation. The former occurred predominantly in the lowland (south) with implications for the natural environment causing water pollution.

Agricultural production is obviously present in the north as well, but farming techniques differ from the lowland. Subsistence agriculture prevails in hilly Goričko, with smallholdings being managed by family members during the off-work hours (complementary activity) since families rely on their

⁴⁹ Original citation: „A szőlőhegyet is már inkább csak hegynek lehetne nevezni.”

⁵⁰ Original citation: „A legnagyobb baj akkor történt, amikor az istállóból garázszt csináltak.”

income from off-farm employment. Respondents reported that despite this most continued to be engaged in land cultivation at weekends/afternoons. The outflow of the labour force from agriculture to Industry and other work combined with the emigration has resulted in a decrease in farming activities and abandonment of agricultural land. In the area surrounding Selo in Goričko, respondents also noticed that small vineyards have been disappearing over the past decade and that intensive production of fruit has expanded in the past 20 years. In the past orchards in Selo were owned by agricultural cooperatives; nowadays they are privately owned.

Maize drying “cages” were frequent as well as bee hives, and neither was observed in Őrség. In Pomurje, farm equipment was more modern; tractors were larger, usually Fiat models and metal ploughs with mouldboards with two to four tines were being used for valley floor winter crop cultivation while those in Őrség where old Belarus machinery was still in operation. Maize crops were being harvested using modern combine harvesters.



Farm machinery currently in use in Őrség (HU)
Photo: Julia Ellis Burnet



Pomurje Agricultural machinery (SLO)
Photo: Julia Ellis Burnet

Respondents reported that abandonment of agricultural land appears to be more apparent in Goričko and that today most of the local population are employed in other sectors and do not depend on income from on-farm activities. The changes in farming are well captured in the words of the farmer we interviewed in Bogojina: *“Farming is today very confused. Now we only have three big farms with 130 cows in the village, but just a few decades ago every house in the village had two cows, because they used them also to cultivate the land. The first tractors came in 1970s ...”*⁵¹

In Őrség, once almost everyone had forest. *“Forest was the bank of the Őrség’s people”*⁵² (several interviewees mentioned). People believe that they had managed their forests very cleverly. Selective cutting was typical. If people needed money, they cut and sold one single tree from their forest. There were enormous oak trees in forests, which could not be embraced by 2-3 people. Beside the oak, Scotch fir, hornbeam and beech was typical. Forests were clean: dry branches were collected for firewood, even leaves fallen to the ground were collected for bedding in the stables for the cows. *“They swept out the forest”*⁵³ (Interviewee from Magyarszombatfa).

In the 1950s, due to the collectivization, forests were taken away from their traditional owners. Many of the old stands were cut and replaced by spruce, but these plantations became weak

⁵¹ Original citation: *“Kmetijstvo je danes zelo zmedeno. Zdaj imamo samo tri velike kmetije s 130 kravami v vasi, ampak le pred nekaj desetletji je vsaka hiša v vasi imela dve kravi, ker so jih uporabljali tudi za obdelovanje zemlje. Prvi traktorji so prišli v 1970-ih ...”*

⁵² Original citation: *“... az erdő volt az őrségi ember bankja...”*

⁵³ Original citation: *“... kisöporték az erdőt...”*

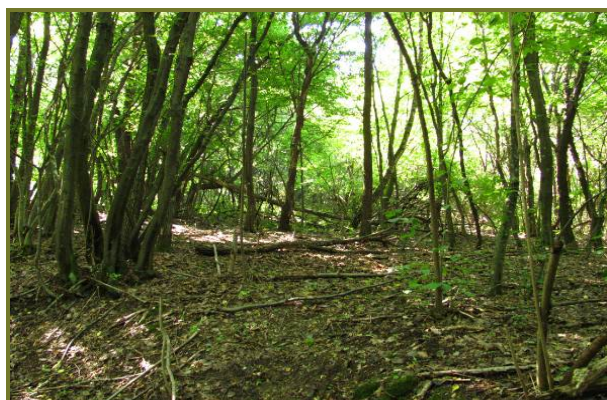
because of drought and they could not resist to wood worms, so they became damaged. *“One direction was bad...forcing the monocultures”*⁵⁴ (Interviewee from Óriszentpéter).



Old beech trees in the Himfa forestpark (HU)
Photo: Pál Balázs



Spruce forest near Szentgyörgyvölgy (HU)
Photo: Pál Balázs



Neglected forest in Orfalu (HU)
Photo: Pál Balázs



Clear felling of mature beech stand covering about 4 ha
in Órség (HU) Photo: Julia Ellis Burnet

“Thanks to the bad compensation system the forest does not belong to the inhabitants in reality” (Interviewee from Kercaszomor)⁵⁵. Local people did not get back what the state took away. There are several forest parcels which have more than 100 owners which complicates their management. *“Forests are miserable; they are not managed as well as in the old times”*⁵⁶ (Interviewee from Velemér). According to our respondents, there are many clear cuts and an enormous quantity of wood is transported to Austria, they usually see 15-20 lorries per day loaded with logs. The growing number of people coming to Órség to pick mushrooms is another issue mentioned by respondents.

In contrast, Pomurje respondents did not perceive any major differences in size of the forests over the past 60-70 years. This result is surprising, because a botanist (Bakan, 2006) reported pressures on lowland and hilly forest stands. *“Due to the increased felling, the floor of the forest is drying up, pedofauna is dying away, low forest communities are decaying and are being replaced by aggressive brambles. Even the reforestation of these areas does not solve these problems because the young trees are still being planted in rows, arise from the same genetic fund, are of the same age and likely belong to species which did not originally thrive in the region.”* (Bakan, 2006: 11). In Prekmurje the

⁵⁴ Original citation: *„Egy irány volt a rossz... a monokultúrák erőltetése.”*

⁵⁵ Original citation: *„Hála az elfuserált kárpótlásnak az erdő sem az ittenieké.”*

⁵⁶ Original citation: *„Koszorak az erdők, nem tartják őket karban úgy, mint régen.”*

best preserved forests are located along the Mura River and evaluated as an important nature conservation area with high biodiversity (Globevnik, 2007; Čarni et al., 2008).

Respondents did mention invasive black locust (*Robinia pseudoacacia*) which is spreading, especially in the lowlands of Pomurje. Respondents had positive and negative opinions about the spreading of the invasive Black Locust trees. It is very useful for poles in vineyards, constructing barrels, firewood, honey production and it is also used as a timber for mill wheels on the Mura River. Some respondents reported planting it on steep areas, where land cultivation was difficult. But there are also some reports of negative impacts, such as losing some traditional tree species such as alder which is being replaced by black locust.

4.3.3. Changes in settlements, infrastructure and tourism

Settlement in Órség were typically built on the top of the hills and consisted of house groups called "szer." Traditional buildings are U-shaped log houses with "kódisállás." That means a little porch in front of the houses where poor people could have a shelter. The first of this type of house was built in the 1870s. The houses were enclosed by fences to protect the livestock from wild game. Around the plots there were no fences, only some hornbeam-hedges surrounded the gardens.

Nowadays, people use fences and they build buildings in a new style painted in strange colours. *"People are building types of houses, which does not suit here"*⁵⁷ (Interviewee from Óriszentpéter). The National Park tries to regulate them, but it can only control the building process in protected areas. Old, traditional houses are abandoned and they usually fall into ruin. Log houses have almost completely disappeared. The original settlement structure with "szer" has remained mostly in Szalafő and Óriszentpéter.



Traditional house in Szalafő (HU)
Photo: Pál Balázs



New building in Óriszentpéter (HU)
Photo: Pál Balázs

Across the border in Pomurje, the extension of settlements and buildings has increased. The function of rural settlements has been altered and is now changing into an urban village existence. Farm buildings, such as stables, have been transformed into garages for cars and into new houses. Respondents also noticed changes in the architecture. Similar to respondents in Órség, many dislike the colourful visual image of the newly built houses in Pomurje. However, in the proximity of the Hungarian border, the architectural style is more traditional and due to the former Iron Curtain infrastructure is poorer.

Most villages in this region were located on hill tops or upper slopes while hill crests were mostly afforested. Older homesteads were similar to those sighted in Hungary – either one long building with an adjacent out house or "L" shaped. However, in contrast to those in Órség, there was not the

⁵⁷ Original citation: „Olyan kacsalábon forgó házakat építettek, amelyek nem illenek oda.”

extensive array of large barns or byres for cattle husbandry. Older homesteads were made of red brick while others were a mix of brick and pisé (cob). Barns had a decorative, and intricate, open work pattern in order to facilitate cross ventilation for drying.



L-shape house with barn,
Photo: Szentendreyne Havas Márta



A village garden plot adjacent to a village home
(circa 1930) in Pomurje

In Őrség during the 1940s there were only footpaths and cart roads. Even the bicycle was not typical. Roads were cleared regularly and wayside trees were pruned. These trails were replaced by gravel and later paved roads. Currently, ditches are not cleaned so the water cannot flow away. The traffic has become more intensive which damages the roads and it is dangerous for cyclists.

Almost every respondent complained about the state of public transportation. Buses are infrequent, and the travel time is long because the bus passes through every little village. The railway formerly took the products from Őrség to Budapest for sale. In 2001 a new railway line was built, which connects the Őrség Region with Zalaegerszeg, not with Körmend, which is the regional center of the area. Now rail travel is very complicated and it takes long time to get to Körmend. Trains are underused and industrial transport is more typical. As one of our respondent from Kercaszomor said: *"Anyone who has no car, is dead"*.⁵⁸

Pomurje respondents have also noticed that infrastructure in their region has been improving over recent decades, e.g. roads are now covered with asphalt. Infrastructure development is evident in the improved road connections, new railway connections with Hungary and telephone connections. In 2009 a highway connected Pomurje with the rest of Slovenia. Plumbing and sewage systems remain a problem in some areas of Goričko.

The closed frontier zone kept industrial development away from Őrség. Small scale industry was typical in the area and almost everyone knew wood carving. There were water mills beside streams. *"A long time ago there were no villages without sawmills or frame saws"*⁵⁹ (Interviewee from Őrszentpéter).

There were brick factories in Pankasz and Bajánsenye. Őrség was famous for its potteries in Bajánsenye, Kercaszomor, Szentgyörgyvölgy and Magyarszombatfa. Unfortunately the brick factories have currently ceased production. Sawmills have almost disappeared. Only a little pottery factory is working in Magyarszombatfa. According to a respondent, the local light industry was ruined in the region because of the cheap Chinese products. However, there is a new dairy in Szalafő, which supplies the local market with its products. Without significant industrial developments, the industrial pollution is negligible.

⁵⁸ Original citation: *"Akinek nincs autója az halott."*

⁵⁹ Original citation: *"Régen nem volt olyan falu, amelyben ne lett volna fűrésztelep vagy gatter."*



Old mill (left) and sawmill (right) in Óriszentpéter (HU), Ethnographic Exhibition in Óriszentpéter

Changes in the Pomurje regional industrial sector had had a substantial effect according to respondents. In the 1960s state investments went into the development of industrial plants in the lowland part of Pomurje: the textile industry (Mura), agro-processing industry (ABC Pomurka, Panvita, Pomurske mlekarne), wood processing industry (Murales), metal industry (Kovino Panonia), chemical industry (Nafta, Krka, Kema), etc. These industries offered an employment alternative to farming and many people preferred to seek job opportunities in local industry, but others migrated to urban centres elsewhere. In recent years there is high unemployment in the region, as many industries have gone bankrupt.

Órség was always popular with tourists. In the 1930s people came here to get to know the real peasant's life. They helped in farming activities. Tourism became more intensive after the Iron Curtain was removed. People have built guesthouses. They take care of their estates, houses and lawns. Cycling tourism is developing, and equestrian tourism is also becoming more popular. There are many programs for tourists from early spring through to late autumn. Because of its seasonality, tourism means only an extra income for local people. Growing tourism can cause negative effects on the environment.

Respondents from Pomurje see some positive changes in the tourism sector. Respondents reported on the constant development of tourism to thermal spas over the past decades. They mentioned spa resorts in Lendava, Moravske toplice and Radenci. This development is also bringing some additional changes to the landscape, such as a golf course in Moravske toplice. Since the Goričko Landscape Park was established, the number of local tourist associations has increased. Respondents from Goričko also noticed the increase in the number of tourists visiting Goričko since the park was established in 2003. Local tourist associations host numerous events, especially those related to reviving the traditional customs and crafts. Respondents also mentioned new thematic tourist roads with signs such as wine and historical roads.

4.3.4. The vision of the future and the ideal landscape

Órség respondents like the hilly, gently sloping, and well managed landscapes with much natural and cultural value, with many green, flowery fields and streams. Most of them think that the ideal landscape is this Órség, but the picture of what they describe is the old Órség instead of the present Órség in Slovenia.

*"I like the Órség! I am in love with it!"*⁶⁰ (Interviewee from Magyarszombatfa)

*"It should remain as it is now."*⁶¹ (Interviewee from Szalafő)

⁶⁰ Original citation: „Mint az Órség! Az Órség az, amibe szerelmes vagyok.”

"In Slovenia now the landscape is like the former landscape in Őrség." (Interviewee from Szalafő)⁶²



Former scenery in Őrszentpéter (HU)
Exhibition in the Municipality of Őrszentpéter



Landscape in Dolenci (Dolány) (SLO)
Photo: Pál Balázs

For the Pomurje respondents, the natural and cultural characteristic of the landscape should not change and the landscape mosaic should be preserved. They think that people should live in harmony with nature; there should be more solidarity among people and more community work in the villages. They would like to live in a quiet and unpolluted environment, far away from the modern world. A respondent from Cankova said that *"everything should stay as it is now. Young people should be motivated to stay here... I am also afraid that cultural landscape will disappear if only big farms remain and there is no diversity."*⁶³

A Pomurje respondent working in the park administration expressed his desire to see changes in the mindset of local people. This would be reflected in the improved appearance of the streams and rivers, there would be less light pollution and hopefully more people will depend economically on farming, and additionally with more tourist activities.

Őrség respondents have a really pessimistic view of the future. They think that forests will continue to spread while arable land and grasslands will shrink. The natural diversity will decrease. The little villages will disappear because without employment opportunities, young people will move away. Some respondents are still hoping that it is possible to revive the farming, so the landscape would be the same as it was in the 1970s.

*"People of Őrség are disappearing."*⁶⁴ (Interviewee from Szaknyér)

*"Family trees die out during decades."*⁶⁵ (Interviewee from Viszák)

*"We have past, we still have a present, but our future is doubtful."*⁶⁶ (Interviewee from Kistrákos)

⁶¹ Original citation: „Maradjon meg úgy, ahogy van.”

⁶² Original citation: „(Szlovéniában) olyan a táj, mint nálunk régen volt.”

⁶³ Original citation: " Vse naj ostane tako, kot je zdaj. Mladi morajo biti motivirani ostati tukaj ... Bojim se tudi, da bo kulturna krajina izginila, če bodo le velike kmetije ostale in ne bo raznolikosti."

⁶⁴ Original citation: „elfogynak az őrségi emberek”

⁶⁵ Original citation: „családfák halnak ki évtizedek alatt”

⁶⁶ Original citation: "múltunk volt, jelenünk még van, de jövőnk az nem biztos, hogy lesz”



Abandoned building in Óriszentpéter (HU)
Photo: Pál Balázs



Building in Szatta (HU)
Photo: Pál Balázs

Correspondingly, Pomurje respondents are aware that their population is aging and that the younger generation is moving into larger cities. Respondents are pessimistic with regard to the agricultural and economic future in Pomurje and they think this will have negative impacts on the landscape. Younger generations are working in industry and therefore many respondents think that the land abandonment will be even more evident in the future. Respondents also expect that in future people will be more environmentally aware, but they are concerned that agricultural land is transforming into urban areas.

5. Highlights of the perception and conclusions

5.1. Main focuses in the perception of the present, the past and the landscape changes

5.1.1. Elbe Sandstone Mountains – Project Region North

The respondents talked about their perceptions of natural elements as well as landscape changes due to human influence. It is obvious that both, natural assets (such as rocks, forests, and border rivers), and cultural assets, (Umgebinde houses and wayside crosses), give the Elbe Sandstone Mountains its shape as a trans-boundary natural and cultural area.

The impacts of the past century with the expulsion of Germans from North Bohemia after the Second World War and the time of socialism are still recognised in the landscape. There are ruins of industrial complexes and residential houses in the Bohemian villages which are viewed negatively by most of the interviewed persons. Some melancholic voices said that they missed the former landscape diversity, the local communities, the numerous fruit and vegetable gardens and the husbandry, the traditional handcrafts and regional products. However, the interviewees were glad, when Umgebinde houses and small historical monuments were reconstructed and people started to pay attention to the cultural heritage of their region. It was regarded as positive when regional values were rediscovered and were further developed, and when trans-boundary events and farmers markets were organised. These were venues where a cross-border exchange of ideas of how to develop their regional values sustainably in common took place.



Czech-German border landscape
Photo: google panoramio/Milan Pekky Bouška

Nature doesn't have sharp borders, but humans define them. In the Elbe Sandstone Mountains people have lived with the border for decades. Trespassing was forbidden and required many formalities to cross the border during the socialist era. More than ten years ago the Czech-German border lost its barrier function. After the accession of the Czech Republic to the Schengen agreement in 2007, the border has the same meaning as the other national borders of the European Union. In the landscape the border is still visible in form of border stones and signs, but overpasses are allowed, even desired, to bring forward the trans-boundary exchange between Saxony and Bohemia in many fields. The contemporary witnesses also participate in this exchange. On some days during the year they visit the neighbouring country "around the corner," but most of the time they rather

stay in their local daily range that they are used to and familiar with. It will take a few years until the mental borders will be gone and the people can exchange and cooperate as self-evidently as in the German-Dutch border area.

The multi-faceted impressions of landscape change show how individual landscape is perceived and interpreted. The protected areas and their trans-boundary connectivity and the traditional regional assets, like the Umgebinde houses, the historical handcrafts and agricultural products etc. should be conserved and developed in a sustainable way by adequate initiatives and projects. They would make the Elbe Sandstone Mountains into a distinctive trans-boundary region in Central Europe.

5.1.2. Sopron basin, Fertő/Neusiedlersee, Hanság – Project region Central-South

The overview of the responses both in Austria and Hungary definitively show the strong priority of the issues related to water and water management. The occurrence of surface water (lakes, streams, rivers, canals), underground water table, springs, the irrigation, the endangerment of waters, the change of water household, the land reclamation by river regulation and draining of the former wetlands are crucial in landscape identity, and in its changes during the last century. The availability and existence of the surface water and underground waters, their quality is the basis of the stability of local climate, agriculture, and influences highly valuable natural habitats and recreation. Domestic water and its changes plays an important role in the magnitude of landscape transformation. In the mountainous and hilly areas, as well as in the Fertő landscape where the water system has not been so deeply converted, the changes are certainly less significant, than in the Seewinkel and the Hanság. There are conflicts in the management of reeds and fishing in Lake Fertő. Finally water is an important issue mentioned by respondents when talking about future strategies and the tasks necessary to restore landscape and habitat. According to the opinion of many interviewees, water is the key element in the future of the region.

The second issue is the management of the agricultural areas and forests. The cultivation of arable land and vineyards, vegetable gardens, and management of grasslands, livestock, forests and wildlife show two opposite directions. On the one hand a huge intensification has taken place on the reclaimed marshland and on the terrace flatlands (except the border zone of the Iron Curtain), but on the other hand the environment friendly cultivation and the abandonment have also recently gained ground. The intensification resulted in decreasing the carrying capacity of the region as fewer people could live from agriculture and horticulture. Most people living in villages in Hungary have a job in the nearby towns the land abandonment is also common. The attachment of local inhabitants to the land has weakened while nature conservation and recreation became more dominant.

The third point we have to stress, based on the answers of the interviewees, is the expansion of the built up areas, the “slinking” and the clearly perceivable urbanisation. This is mainly due to the increasing population’s claim for more comfortable and spacious houses and flats, but an industrial and infrastructural development is equally present. There are differences within the region. The extension, the spreading of the built up surfaces, the construction of new roads, are prevailing and continuous in Austria and more recently around the town of Sopron. The extension of industrial areas and the instalment of numerous wind generators are typical in Austria. However, the Hanság has remained more rural. The changes there took place earlier after the water reclamation in the 1960-70s.

A further change perceived by people is the growing role of recreation and tourism. The need for various outdoor activities (bathing touring, cycling) has increased gradually from first half of the 20th century. In Austria this Pannonian landscape is especially appealing and the proximity of Vienna also contributed to the increasing tourism from the 1960-70s. However in recent years there is a growing importance of cultural, wine and health tourism. Many respondents think that diversification of opportunities for reaction is necessary to maintain or enhance the number of visitors. In Hungary the situation was similar in the town of Sopron but the “boom” in recreational demands, the speeding up

of creating recreational facilities around Lake Fertő has happened only recently and is just beginning with small steps in the Hanság. Many interviewees in both countries stressed that only slow, environment friendly tourism should have developed in the region and the natural areas provide a great potential for it.

The last question that has to be highlighted is the role of nature conservation and the protection of the cultural values within the landscape. The respondents have various opinions on those roles, particularly the benefits vs. disadvantages of the designated areas. Of course the positions depend on personal life strategies and values. The positive views of the Austrians who participated in the interviews was dominant. In Hungary there is much more conflict. It became obvious that the communication between the Fertő-Hanság National Park and the other local stakeholders, land users and inhabitants is insufficient. Good cooperation and mutual understanding has not yet been achieved. The development strategies, the management of the World Heritage cultural landscape and the national park are not fully harmonised.

5.1.3. Őrség/ Goričko –Project region South

According to the memories of the interviewees, the landscape in Őrség and Goričko had once been much better managed due to the harmonious man-nature relationships. Landscape meant a source of living and people's life. Their activities were obviously related to agriculture and silviculture. According to the Hungarian respondents, it is still the case in Slovenia.

Landscape structure was formed by the mosaic of grassland, arable lands and forests. This complexity of the pattern resulted in a high diversity of habitat and species. In the second half of the 20th century cultivation became more intensive on both sides of the border. In Goričko the small parcels still exist, but in Hungary big arable land parcels were created and several forest belts, tree rows and hedges, as well as meadow-orchards were cut down. Formerly, the green corridors along the roads providing connection between the semi-natural habitats had been important elements of the ecological network. A further problem is land abandonment, the decrease of livestock, the lack of grazing mainly in Hungary and as a consequence the spreading of the invasive species and the spontaneous reforestation of the grasslands. The openness and the mosaic structure are gradually disappearing and this has a negative impact on biodiversity. In Slovenia people manage the grasslands because they get subsidies so the meadows still exist.

While settlements and artificial surfaces are growing, they don't have significant negative impact on the landscape's ecological connections. The collapse of almost all industrial activities on both side of the border also means that environment pollution which could harm the natural habitats is not perceivable. On the Slovenian side, the use of the chemicals and fertilizers causing soil and water pollution has been highlighted by the respondents.

5.2. The role of nature and the visual perception in defining landscape identity and changes

5.2.1. Sopron basin, Fertő/Neusiedlersee, Hanság – Project region Central-South

Although in the Sopron-Fertő-Hanság region the relationship between official nature conservation and the locals is so far not without conflicts, the majority of the respondents revealed a love of nature and a strong attachment to the landscape, even though from very various viewpoints. They listed mostly natural elements when they talked about their pride in the landscape. Most interviewees in both countries mentioned the nice wilderness due to the closeness around the Iron Curtain and many Austrians wished for a landscape that is less controlled and more natural. The most frequently referred to elements in the landscape are the waters, especially the lake, the particular flora and fauna, the

diversity of habitats, and the forests. Amongst the favourite places there is also a dominance of natural areas. Many respondents are also aware of the negative impact of urbanisation and the new construction of infrastructure, industry and commerce. We conclude that the majority of the non-experts do not know the term “ecological network” directly despite their statements reflecting a kind of responsibility toward nature. The “ecological network” is partly known by experts but only few have precise information about it.

The visual perspective and the significance of scenery occurred in several answers. For many respondents, the scenery is evidently important for the landscape. Descriptions referred to the uniqueness of the landscape, to the pride, and favourite places have been related to the scenery both on the Hungarian and Austrian side. Often the selection of favourite places depended on the vista from a certain point, as it is also typical that amongst pride and uniqueness they mentioned the view of a city, village or landscape, and elements which have important role in the view.

We found information related to the view in the descriptions of the past and the landscape changes. That is why they perceive its changes: disappearing panorama due to the expansion of artificial surfaces, cutting of trees and tree rows, and a decrease in green spaces. These elements cause “damage to the scenery” (buildings, roads, sewage systems) and also processes which alter the characteristics of scenery. They clearly made negative judgements on these processes.

The visual perspective is also mentioned in future scenarios, where respondents are afraid of the expansion and occurrence of additional constructions that lead to the modification of the actual scenery.

5.2.2 Őrség/ Goričko –Project region South

People in Őrség and Goričko are proud of the natural values; they have a close connection to the whole landscape and to the natural and man-made landscape elements. Generally this linkage appears in their description of the past. People in Őrség described the former landscape with emotion; their precious forests, the tremendous colourful flowers on the grasslands etc.. This relationship is reflected in their traditions that people left fruits on the trees to feed birds in winter time. Nature was an obvious part of their life and they have never forgotten about it.

In Hungary the property structure and land management system changed significantly transforming the man-nature relationship. Today many of the people in Őrség have no woodlots; they do not keep livestock or cut the hay on the meadows. It seems that the close connection to nature no longer exists. In their description of the present landscape, the picture of the past appears again. They regret the abandoned meadows and the unmanaged forests, however their respect and affection towards the landscape is still living.

We notice some contradiction between their idyllic image of the present Őrség and the tremendous negative changes of the past one hundred years. In people’s minds, a picture appears from the present Őrség, where people are living in harmony with nature. It seems that the respondents appreciate and like the landscape. However they think that in the past everything was much better, and for today everything turned in wrong direction. A question arises: if the Őrség is still very nice and all changes have been negative, how might the landscape have been once upon a time? The answer to this question could be that the values of the past; the idyllic image of their childhood is reflected onto the present perceptions. That is why they cannot perceive the landscape as it is in reality.

5.3 Conclusions for future strategies for ecological network restoration

5.2.1. Sopron basin – Fertő/Neusiedlersee – Hanság – Project region Central-South

On the northern Hungarian study area, the land cover change processes had been more significant in the Hanság, and the habitats are less connected, the scenery is much more transformed than in the Fertő landscape. The majority of land cover changes in the Sopron and Fertő landscape were connected to the abandonment of vineyards, grasslands, the expansion of artificial surfaces the decrease of open water in Lake Fertő along with the increase of the reed belt. In contrast, in the Hanság the changing environment resulted in new, predominantly less natural land cover structure. The former wetlands and alder marsh forests disappeared or remained isolated due to water reclamation. Extensive plantations of poplar clones significantly increased the wooded area and the proportion of arable land has also greatly extended while grassland diminished.

Recently the abandonment of intensive cultivation and the succession of natural vegetation are positive for ecological network. a rapid urbanisation processes is going on creating artificial surfaces in the surroundings of Sopron, where the continuously expanding residential, recreational, industrial and commercial areas create ecological barriers. The Hanság has preserved its rural character due to the less dynamic expansion of artificial surfaces. The tourist infrastructure has locally developed on only a small scale. Although urban developments in the Hanság had no significant impact on the ecological network, the connectivity of the wetlands collapsed after the water regulation and it is still missing within the Hanság and between Fertő, the Hanság and Szigetköz. However, new habitats, e.g. channels and small ponds of gravel-pits have occurred. They play a positive role as stepping stones in today's ecological network.

Observing man-nature relationship in the study area the high level of environmental awareness and strong attachment to the landscape and nature can be a good basis for implementing ecological network strategies. In the Sopron and Fertő landscapes, there is an increasing number of NGO-s dealing with nature and landscape protection, while in the Hanság they are less significant although we might conclude that residents of the study area are sensitive toward nature and landscape. It is sure that they can be motivated by good communication and environment education. It is obviously important to broaden the knowledge about ecological networks and to solve conflicts between National Park and locals. Effective nature conservation is not possible without local participation. Coordination and cooperation between the actors and stakeholders of the area are equally important, because many activities are isolated.

The differences between the two sides of the border emphasize the importance of cross border cooperation as well. Opportunities and the relevance of trans-boundary cooperation in nature conservation and ecotourism were highlighted by the interviewees.

5.3.2 Őrség/ Goričko –Project region South

The mosaic-like landscape pattern of the traditional small scale farming before the Second World War provided a good connection between natural and semi natural habitats. The whole landscape was significantly more natural and at the same time it provided income for the inhabitants. Thus it was more favourable both for the ecological network and for people. Policies have to resulted in processes that lead to the abandonment of the traditional land management structure and today it is clear that their restoration is necessary.

This study has discovered that the local population, are not familiar with the term “ecological network,” despite their high environmental awareness. They associate mainly on their conflicts with



the nature conservation authorities. “Ecology” is a word for them that means the realm of the National Park, restrictions, and exclusions from their motherland. Therefore it is absolutely necessary that targeted information should be provided to local people. Both official nature conservationists and local residents have the same wishes and devotion toward nature and landscape. They have a similar vision of the ideal landscape and they project the same negative scenarios for the Órség, but there is still a huge gap between them due the lack of understanding and communication. In this study area the consequences are highly similar to those in the former cases so the solutions will also be the same.



Annex I. Guidelines for the Interviews



Guidelines for the Interviews

Place:

Date:

Interviewer:

Introduction, purpose of the interview, permission of using the Dictaphone

I. Personal data of the interviewee

Name:

Gender:

Settlement:

Age:

Profession:

How long have you/has your family been living in this area/settlement?

Where did you live before you settled down here (settlement/county)?

II. Present state and impacts on the landscape

1. Please draw the borders of the ... landscape on the map! Mark the area what you know very well!
 2. What are the unique characteristics of this area making it different from the surrounding landscapes? (natural and built elements)
 3. What are you proud of in this landscape?
 4. What are you not proud of in this landscape?
 - 4.1. What is the most important cultural heritage or landmark of this landscape?
 5. What is your favourite place in this landscape? What is the function of it in your life? Please describe and mark it on the map.
-
6. Are there any major parks or cemeteries in the area which are important for you? Why do you appreciate these?
 7. What kind of gardens do people have in this area? Please describe these gardens!
 8. Do you know any major landscape elements which could have positive or negative impact on nature?
 9. Do you know any environmental problems in the area?
 10. Have you heard about the concept of ecological networks? (if he/she says no, continue with question III./1.)
 - 10.1. How do you define the "ecological network" expression?
 - 10.2. Do you know about activities related to it?
 - 10.3. In your opinion, how is the ecological network functioning in this area?
 - 10.4. What kind of problems do you know which are related to the ecological network?

III. Former state and changes of the landscape

1. Please describe the past landscape you can remember from the earliest period of your life here! (make sure which part and which period is described)
2. Do you know any old tale, story, myth which is connected to this place?
3. Are/were there traditions related to farming or nature, having the message of the respect and protection of nature?
4. Comparing the present and the past of the landscape, what are the major changes you notice?
 4. 1. *What kind of changes did you notice related to forests, lakes, rivers, pastures, orchards?*
5. What kind of changes did you notice related to the agriculture of the area?
6. What kind of changes did you notice related to the forestry?
7. What kind of changes did you notice related to hunting and fishing?
8. What kind of changes did you notice related to the tourism?
9. What kind of changes did you notice related to the infrastructure of the area?
10. What kind of changes did you notice related to the character of the settlements and the buildings? What is your opinion on these changes?
11. What kind of changes did you notice related to the industrial activities in the area?
12. Do you know about any nature conservation activity in this area? What do you think about it?
13. What changes do you expect in the future in this landscape?

Please describe the ideal landscape you want to live in.

IV. Comparison of the situation on the both side of the state border

1. How often and where are you on the other side of the state border? Please mark on the map!
2. What do you think, how well do you know this area?
3. What differences do you see on the two sides of the state border? (present-past-changing-future)
4. What could be the causes for these differences?
5. What kinds of common landscape elements do you notice on this side as well as on the other side of the state border? Do you know something of the origin of these similarities?
6. Do you still notice areas where the border-line is visible in the landscape? If yes, what kind of areas or features are representing the border? (Please try to mark them on the map! – if the interviewer doesn't know, where it is)
7. How did the effect of the border change in this landscape?

V. Collection of other material documents and closing the interview

1. Have you got any old local photographs, postcards, paintings, drawings or old maps of the landscape?
2. Have you got old writings, letters or any written documents, which could inform us about the past?

You can take photographs of the interviewees if they agree.

Close the inquiry by asking if the interviewee is interested in further communication of the results and ask for other potential interviewees.

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